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James O. Johnston (SBN 167330)
Charlotte S. Wasserstein (SBN 279442)
JONES DAY
555 South Flower Street, 50th Floor
Los Angeles, CA 90071
Telephone: (213) 489-3939
Facsimile: (213) 243-2539
Email: jjohnston@jonesday.com
cswasserstein@jonesday.com

Joshua D. Morse (SBN 211050)
JONES DAY
555 California Street, 26th Floor
San Francisco, CA 94104
Telephone: (415) 626-3939
Facsimile: (415) 875-5700
Email: jmorse@jonesday.com

*Attorneys for Franklin High Yield Tax-Free
Income Fund and Franklin California High
Yield Municipal Fund*

**UNITED STATES BANKRUPTCY COURT
EASTERN DISTRICT OF CALIFORNIA
SACRAMENTO DIVISION**

In re:
CITY OF STOCKTON, CALIFORNIA,
Debtor.

Case No. 12-32118 (CMK)
Chapter 9
Adv. Proceeding No. 13-02315-C

WELLS FARGO BANK, NATIONAL
ASSOCIATION, FRANKLIN HIGH
YIELD TAX-FREE INCOME FUND,
AND FRANKLIN CALIFORNIA HIGH
YIELD MUNICIPAL FUND,

Plaintiffs.

v.

CITY OF STOCKTON, CALIFORNIA,
Defendant.

**SUBMISSION BY FRANKLIN
HIGH YIELD TAX-FREE INCOME
FUND AND FRANKLIN
CALIFORNIA HIGH YIELD
MUNICIPAL FUND OF EXPERT
REPORT OF CHARLES M.
MOORE**

Pursuant to the *Order Governing The Disclosure And Use Of Discovery Information And Scheduling Dates Related To The Trial In The Adversary Proceeding And Any Evidentiary Hearing Regarding Confirmation Of Proposed Plan Of Adjustment* [Docket No. 1224] (as amended), Franklin High Yield Tax-Free Income Fund and Franklin California High Yield Municipal Fund (collectively, "Franklin"), hereby submits the Expert Report of Charles M. Moore, CPA, CTP, CFF, a copy of which is attached hereto as Exhibit A.

Dated: March 26, 2014

JONES DAY

By: /s/ Joshua D. Morse

James O. Johnston

Joshua D. Morse

Charlotte S. Wasserstein

*Attorneys for Franklin High Yield Tax-Free
Income Fund and Franklin California High
Yield Municipal Fund*

EXHIBIT A

Expert Report of Charles M. Moore, CPA, CTP, CFF**I. Introduction.**

I have been retained by Jones Day as an expert in municipal finance related to the analysis of business plans and financial projections on behalf of the Franklin High Yield Tax-Free Income Fund and Franklin High Yield Municipal Fund (collectively, “Franklin”) in connection with the City of Stockton’s (the “City”) Chapter 9 filing under the U.S. Bankruptcy Code and the treatment of the Stockton Public Financing Authority Lease Revenue Bonds, 2009 Series A (Capital Improvement Projects) (the “Franklin Bonds”), which represent a \$35.1 million loan (\$37.1 million including unpaid prepetition interest) to the City, in the City’s proposed First Amended Plan for the Adjustment of Debts of City of Stockton, California (November 15, 2013) (the “Plan”).

I am a Senior Managing Director and Shareholder of Conway MacKenzie, Inc. (“CM” or the “Firm”). CM provides turnaround consulting and financial advisory services to distressed organizations, municipalities, and their constituents, as well as due diligence, fraud investigation and litigation support services. The Firm was established in 1987 and has nine offices throughout the United States. CM has been recognized as an “Outstanding Turnaround Firm” by the publication *Turnarounds and Workouts* every year since 2000, was named “Turnaround Firm of the Year” by M&A Advisor in 2011, and has received several awards for its work in performing turnarounds and conducting transactions for a variety of clients.

Attached as Exhibit 1 are my Curriculum Vitae, statement of compensation, listing of other cases where I have testified as an expert or fact witness at trial or by deposition during the past four years, and listing of publications I have authored in the previous 10 years. The procedures performed in connection with this engagement were either performed by me or under my supervision by employees of CM.

The information in this report is presented as of the date of this report. The opinion and conclusions expressed herein are subject to change based on additional data, facts and information that may be received subsequent to the date of this report. In addition, it is possible that I may be asked at a future date to review and respond to a report issued by an expert(s) retained by the City.

II. Case Background.

Several financial institutions either have debt outstanding or have insured debt outstanding with the City. These include National Public Finance Guaranty Corporation (“NPFPG”), Assured Guaranty Municipal Corp. (“Assured Guaranty”), and AMBAC (“Ambac”). These entities have all settled with the City. In the Plan, the City proposes to place the Franklin Bonds in a class entitled “General Unsecured Claims.” This class includes an alleged amount of \$545.9 million of Retiree Health Benefit Claims (also known as other post-retirement employee benefit (“OPEB”) claims, which are to receive an aggregate

payment of \$5.1 million.¹ The City then proposes (1) to treat Franklin's claim as a claim for damages resulting from rejection of a lease and to limit the claim, pursuant to section 502(b)(6) of the Bankruptcy Code, to approximately \$10 million; and (2) to apply the same <1% recovery as that allegedly afforded to the retirees in respect of the Retiree Health Benefit Claims. Therefore the Plan proposes to pay Franklin approximately \$94,000, or 0.25%, on its \$37.1 million claim (including accrued prepetition interest).

III. Information Considered.

Refer to Exhibit 2 for a list of the facts and data I considered in forming my opinions.

IV. Qualifications And Industry Experience.

I have been employed by CM since October 2001, the last six years as a Senior Managing Director and as a shareholder for the last seven years. Prior to joining CM, I was employed as the CFO of Horizon Technology LLC ("Horizon"), an automotive supplier, for approximately one and a half years. Prior to joining Horizon in February 2000, I was a manager at the public accounting firm known as Deloitte & Touche LLP, where I provided consulting services to mid-sized organizations, working in the Management Solutions & Services department.

My practice area includes providing crisis management and turnaround consulting services to underperforming municipalities and organizations in a variety of industries, and I lead the firm's Governmental Services Group. I have been involved in developing and assessing business plans and financial projections in over a hundred matters throughout my career. I have won numerous awards for my work in turning around organizations and helping them become more efficient. In 2007, I was appointed to the Legislative Commission on Government Efficiency for the State of Michigan, a nine-person panel tasked with identifying ways to make state government more efficient, where I led the Procurement and Sourcing Work Group. Currently I lead the team providing operational restructuring services to the City of Detroit in its landmark Chapter 9 case. I also have extensive experience with defined-benefit pension plans and OPEB claims. In one of my recent assignments, I conducted an extensive analysis of the underfunded position of the Employee Retirement System for the Commonwealth of Puerto Rico. Additionally, I have been involved in multiple engagements where I have identified and evaluated alternatives for providing cost-effective health care benefits for both active and retired employees. Other municipal/government projects in which I have been involved include, among others, Jefferson County,

¹ The Plan lists the amount as \$545.0 million; an individualized listing of retirees by name totals \$545.9 million. The City's designated witness stated in her deposition that the \$545.9 million figure was the City's calculation of the OPEB claim amount (see A. Goodrich Tr. (3/17/14) at 14:9-12 (rough draft). Accordingly, that figure is used in this report. As described below, I believe that the actual OPEB claim amount is substantially smaller than the amount to which the City has stipulated.

Alabama; Detroit Public Schools; Wayne County Circuit Court; and work performed on behalf of the American Federation of State, County and Municipal Employees (“AFSCME”).

I am a Certified Public Accountant, Certified Turnaround Professional, Certified in Financial Forensics and hold memberships in the Turnaround Management Association, American Bankruptcy Institute, American Institute of Certified Public Accountants and Michigan Association of Certified Public Accountants. I am also a past President and former member of the Board of Directors for the Detroit Chapter of the Turnaround Management Association. I received my Master of Business Administration and Bachelor of Arts degrees from Michigan State University. In 2008, I was honored by *Crain’s Detroit Business* through selection to the class of “40 Under 40” and in 2006, I was named one of twelve ‘People to Watch – Business Professionals Making Their Mark’ by *Turnarounds & Workouts*.

V. Summary Of Opinions.

The opinions I have reached in this matter are based on the work performed to date, as well as my professional experience as a business consultant as described above. They are:

- A. Based on the projections in the City’s revised Long Range Financial Plan (“LRFP”)², the City can afford to pay Franklin a significant percentage, if not all, of the City’s obligations in respect of the Franklin Bonds.
- B. The City is paying other creditors with rights similar to those held by Franklin recoveries that dramatically exceed the proposed *de minimis* recovery to Franklin in respect of the Franklin Bonds.
- C. The City’s pension obligations, particularly for the Safety Plan, are very high, growing and unpredictable.

VI. Opinion One – Detailed Basis: Based On The Projections In The City’s Revised LRFP, The City Can Afford To Pay Franklin A Significant Percentage, If Not All, Of Its Obligations In Respect Of The Franklin Bonds.

In the Plan, the City proposes to treat the claim arising from the Franklin Bonds as a claim for damages resulting from rejection of a lease and to limit the amount of that claim, pursuant to section 502(b)(6) of the Bankruptcy Code, to approximately \$10.0 million. The City then proposes to make a payment on that claim equal to the “capped” claim amount multiplied by the “Unsecured Claim Payout Percentage,” which the Plan defines as “the percentage paid on account of the Retiree Health Benefit Claims (unless the amount of the Retiree Health Benefit Claims changes, that percentage will be equal to 0.93578%, i.e., \$5,100,000 divided by \$545,000,000).” The City therefore proposes to pay Franklin approximately \$94,000, or 0.25% of the principal amount and accrued prepetition interest on the Franklin

² Delivered to Franklin on March 3, 2014.

Bonds. Based on the resources available to the City as detailed in the LRFP, the City can afford to pay Franklin a significantly greater recovery from revenues received over time. Moreover, given an extension of the maturity of the Franklin Bonds commensurate with the extension provided other creditors in the restructuring of their obligations under the Plan, the City should be able to pay the amount of the claim in respect of the Franklin Bonds in full.

A. The City's LRFP Represents A Conservative Forecast.

The City touts the “conservatism” of its assumptions in several places throughout the LRFP, observing that “it is possible that actual revenues will be better than expected” (see LRFP page 3) and that “variances are somewhat more likely to be ‘good news’ than ‘bad news’” (see LRFP page 2). Reflecting this conservative bias, the City even includes an alternative scenario where annual revenue growth is 0.5% better than projected. In this scenario, the City states that there is an additional \$476 million available to pay “mission critical spending” (see LRFP page 3). It is notable that the City provided an upside alternative scenario but not a downside one in the LRFP.

Based on historical data accompanying the LRFP provided by the City, I agree that the LRFP is indeed conservative. Property taxes are forecast to grow at a 3.1% compound annual growth rate over the duration of the forecast (from FY2012-13), as compared to 4.3% over the last 15 years through FY2012-13. Sales taxes are forecast to grow at 3.2%, versus 3.8% over the last 15 years. This historical period includes a full economic cycle containing both an abnormal boom as well as a severe financial crisis. Given these facts, the material differences in the property tax and sales tax growth rate assumptions over the forecast period are conservative when compared to available historical data. Similarly, the utility users tax is forecast to grow at 1.4% versus a 2.2% compound annual growth rate over the last 15 years. While the City bases the lower growth rate forecast on tangible factors such as reduced use of cable and landline phones and customer conservation efforts, the utility users tax growth rate would also seem to be conservative.

Documents prepared by the City in connection with the February 25, 2014 City Council meeting further confirm my opinion that the LRFP is a conservative forecast. These documents indicate that because the City's property tax revenues are trending ahead of budget for the current fiscal year, it was appropriate for the City Council to adopt a resolution increasing the property tax revenue budget for FY2013-14 by approximately \$1.0 million. City staff explained that “[p]roperty values in the City of Stockton experienced a net taxable value increase of 3.6% over the prior year resulting in a 2.9% increase in projected general fund revenues for a total of \$44.9 million. This is an increase of 0.6% from the FY

2013-14 Adopted Budget.”³ In fact, the current LRFP reflects \$18.4 million in additional property tax revenues over the first 10 years of the LRFP (FY2012-13 through FY2021-22) as compared to the version of the LRFP that the City included with its Disclosure Statement just three months ago.⁴ City staff also noted that expenditures are projected to be lower than budget due to salary savings, while cautioning that it was too soon to draw conclusions for the full year as certain positions are currently being filled.

Results from the prior fiscal year (FY2012-13) provide further support for the City’s conservatism. Ultimately, general fund revenues for Fiscal Year 2012-13 were \$6.2 million in *excess* of budget and expenses were \$9.7 million *under* budget.⁵ In their report on year-end results, City staff noted that “median home prices are trending upward,” sales taxes were more than 2.6% over budget, “Utility Users Tax (UUT) revenues are projected to come in about 1.4% above the budget,” and franchise tax revenue is projected to be 3.7% over budget. On the expense side, \$5.0 million of the expenditure savings was due to vacant positions (primarily in the police and fire departments), \$1.6 million was for anticipated labor litigation that did not occur and \$2.0 million of the expenditure savings was due to non-use of the contingency that the City forecasts to be needed every year for the entire 28 year projection period commencing with FY2013-14.

B. The City Builds Cash Over the Term Of The LRFP, Sufficient To Pay A Material Portion, If Not All, Of The City’s Obligation In Respect Of The Franklin Bonds.

The City builds significant cash over the course of the LRFP, such that in the last year of the LRFP (FY2040-41), the City is projected to have cash reserves of \$58.4 million. Additionally, as noted above, the City has factored into the LRFP a \$2.0 million “contingency” in each year beginning with the 2013-14 fiscal year. This contingency is not allocated to any specific expense line item. If the LRFP is realistically and accurately forecast, there will likely be both favorable and unfavorable variances over the forecast period, which should generally balance out over time. Therefore, assuming that the LRFP is realistically and accurately forecast and assuming cash resulting from positive variances to the LRFP is not diverted to other uses, the City’s adjusted cash balance at the end of the forecast period would be \$114.4 million, or approximately 42% of the City’s average annual general fund expenditures over the forecast period. This figure comprises 1) the \$58.4 million ending cash balance listed by the City, and 2) the \$56.0 million

³ See Agenda Item 15.4, Fiscal Year 2013-14 First Quarter General Fund Status Update And Authorization To Amend the FY2013-14 Budget, page 3.

⁴ There are significant changes to various line items in the updated LRFP. For example, despite the property tax increase in the first decade described above, overall property tax revenues are lower by \$26.8 million due to significant reductions in projected property tax revenues in the third decade of the forecast. Sales tax revenues are roughly the same over the first nearly two decades of the LRFP, but are \$31.9 million higher over the last 10 years. Additionally, the City forecasts an additional \$59.1 million for “Charges for Services” over the course of the LRFP. The lack of a clear explanation for most of these changes makes the LRFP itself appear somewhat arbitrary.

⁵ See Agenda Item 15.3 – Fiscal Year 2012-13 Fourth Quarter General Fund Budget Update and Year-End Projection.

cumulative contingency that is built into the LRFP (28 years at \$2.0 million). This cash balance of \$114.4 million is *after* the City pays \$220 million in so-called “mission-critical” spending over the 10 years from FY2031-32 to FY2040-41.

In the LRFP the City states that a “prudent” range for the City’s minimum cash balance at any given point in time is 5% to 15% of budgeted general fund expenditures, and the City therefore forecasts making elective payments toward “mission critical” spending needs in every year where the cash balance exceeds 15%, for a projected total of \$220 million in “mission critical” expenditures over the course of the LRFP. In calculating the ending cash balance of \$114.4 million, I have assumed that the City in fact spends all of that \$220 million on “mission critical” spending and not on payment of the claim in respect of the Franklin Bonds. I do note, however, that the City itself has defined its “mission critical” spending needs as including “*making creditor payments under the plan of adjustment,*” which would imply that some portion of the \$220 million can and should be devoted to payment of the Franklin Bonds (see LRFP page 13) (emphasis added).

Given that unforeseen events and cyclicity are inevitable over such a long period, and that it is impossible to predict when such variances to the budget will occur, the City is wise to provide for a minimum cash balance, expressed as a percentage of expenditures. The purpose of this cash cushion is to ensure that the City does not run out of cash when there are negative variances to the budget; essentially, the minimum cash balance must outlast any period of negative variances. In an accurately-forecast budget, over time any negative variances and positive variances should net out and the cash balance at the end of a given forecast period should be as reflected in the forecast. In such a forecast, the aggregate amount of any budgeted “contingency” would be included in the ending cash balance if the “contingency” funds are not otherwise diverted to other uses in the positive variance years. In a conservatively-forecast budget (as the City describes the LRFP to be), positive variances should outweigh negative variances and the cumulative cash balance at the end of a forecast period should be greater than the forecast amount (again assuming that available funds are not diverted to pay for non-forecast expenditures in positive variance years).

Here, despite the conservatism of this LRFP, the City has included in the forecast a \$2.0 million unrestricted annual contingency, year after year, for every year of the forecast period. The City’s justification for this is that there could be negative variances, and over a long-range plan the “compounding of those variances over time...can get to be pretty significant.”⁶ Negative variances should not be “compounding” in a conservative plan. Moreover, any risk of sustained negative variances would be better addressed with an adequate minimum cash balance expressed as a percentage of expenditures, which would increase over time and therefore better accommodate any such

⁶ See R. Leland Tr. (3/7/14) at 118:22-23 (rough draft).

“compounding.” At any rate, any competent forecast – particularly a “conservative” one – will not result in negative variances to the budget every year, which is essentially what the City is assuming when it states that it needs an annual contingency of \$2 million.

Based on available data from the City’s Comprehensive Annual Financial Reports (“CAFR”), the City’s cash balance as a percentage of total expenditures has averaged approximately 5% over the last 14 years (see Table 1 below). Additionally, the City’s own adopted policy is to maintain a 10% reserve. According to Policy No. 700-4 Reserve Policy – General Fund, effective as of 7/1/06⁷, the City established general fund reserve targets of 5% of budgeted expenditures for “Catastrophic Reserve,” and 5% for “Economic Contingency/Budget Uncertainty Reserve.” Even these targets were aspirational. The City noted in the policy statement that it “anticipated that the initial funding ... at these levels will take multiple years to be realized.” However, notwithstanding the historical record and the City’s adopted policy targeting a 10% level, in the LRFP the City builds cash to the 15% level.

TABLE 1 –
Historical Cash Balance As A Percentage Of Expenditures

City of Stockton (\$'s in thousands)	FY98-99	FY99-00	FY00-01	FY01-02	FY02-03	FY03-04	FY04-05	FY05-06	FY06-07	FY07-08	FY08-09	FY09-10	FY10-11	FY11-12	Average
Cash	\$ 5,078	\$ 6,159	\$ 11,777	\$ 7,221	\$ 8,035	\$ 6,278	\$ 2,796	\$ 8,966	\$ 3,959	\$ 3,463	\$ 6,934	\$ 12,571	\$ 12,193	\$ 10,678	\$ 7,579
Total Expenditures	110,139	118,770	126,278	141,511	134,524	141,569	157,168	167,166	176,488	182,000	174,132	175,657	178,141	162,251	153,271
Cash as % of Total Exp.	4.6%	5.2%	9.3%	5.1%	6.0%	4.4%	1.8%	5.4%	2.2%	1.9%	4.0%	7.2%	6.8%	6.6%	5.0%

Source: Comprehensive Annual Financial Reports (“CAFRs”) for the respective years

As the City notes, the Government Finance Officers Association (“GFOA”) does recommend a budgeted cash balance of “not less than two months of ... general fund operating expenditures,”⁸ which amounts to approximately a 16.7% minimum cash balance. Putting aside whether the City should maintain a minimum cash cushion at the high end of the “prudent” range when creditors have not been paid, and that a 16.7% cash balance is well in excess of the City’s own adopted policy, I have reforecast the LRFP under four scenarios, with the City maintaining a 5%, 10%, 15% and 16.7% minimum cash balance, but without the \$2 million annual contingency. I have done so because in a forecast that is accurately assembled, and especially one that is “conservatively” constructed, inclusion of both a contingency and a minimum cash cushion is redundant and not necessary. Under each scenario, as shown below, the City is able to pay all, or a substantial portion, of its obligation in respect of the Franklin Bonds. For example, in the 5% minimum cash balance scenario, the City is able to pay *all* of the obligations on the Franklin Bonds by the end of the forecast period, and even in the 16.7% minimum

⁷ Adopted by Resolution No. 06-0299 dated 6/6/06; policy statement available on City website.

⁸ The City has not historically been a strong adherent to GFOA best practices; the GFOA, for instance, recommends prefunding versus “pay as you go” for post-employment benefits, a recommendation the City has not heeded. See, e.g., “Considerations for Prefunding OPEB Obligations (2008) (Budget and CORBA),” available on the GFOA website, www.gfoa.org.

cash balance scenario the City is able to pay 51.5% of the principal and accrued prepetition interest on the Franklin Bonds.

Specifically, Franklin is owed \$78.9 million in debt service (including principal and interest payments) over the scheduled payment term of the Franklin Bonds. Assuming that the debt service is paid where there is availability above the minimum cash balance commencing June 30, 2014, and where there is not sufficient cash above the minimum threshold unpaid amounts are carried forward and accrue interest at the blended contract rate of 6.875%, the City's own LRFP produces the following over the forecast period:

- Maintaining a 5% minimum cash balance, the City generates sufficient cash to pay the Franklin Bonds in full. The City ends up paying a total of \$92.5 million, including \$13.6 million in interest on arrearages. The City makes its final payment in this scenario in FY 2040-41, and the City has \$21.9 million remaining at the end of the forecast period (see Exhibit 3).
- Maintaining a 10%, 15% or 16.7% minimum cash balance, the City cannot pay its obligations in respect of the Franklin Bonds in full by the end of the forecast period in FY 2040-41, but it can pay a significant portion of those obligations. For example, under the 10% scenario, the City pays \$76.1 million and has a \$38.3 million cash balance at the end of the forecast period; under the 15% scenario, the City pays \$57.0 million with a \$57.4 million cash balance at the end of the forecast period; under the 16.7% scenario, the City pays \$50.6 million with a \$63.8 million cash balance at the end of the forecast period (see Exhibits 4, 5 and 6).

Moreover, the City has willingly agreed to pay other creditors under the Plan well beyond the forecast period of the LRFP. For example, the City's settlement with Assured Guaranty regarding the Pension Obligation Bonds provides for payments on the restructured Pension Obligation Bonds to FY2052-53 – *twelve years beyond the end of the LRFP forecast period*. If the LRFP were extended to FY2052-53 using the average growth rates for the prior 10 years for each line item and assuming that "mission critical" spending increases by \$2 million per year after FY2040-41 (i.e., an *additional* \$588 million of "mission critical" spending over the additional 12 years), *there are ample funds to pay Franklin a full recovery under each and every one of the minimum cash balance scenarios described above.*⁹

The charts below summarize the amounts available to pay to Franklin, as well as the recovery percentages on the Franklin Bonds obligation and City's cash balance at the end of the LRFP under each scenario, plus a scenario assuming that payments are made through FY2052-53. The recovery percentages are calculated by discounting the Franklin Bonds payment stream at 5%, as the City has done with other creditors.

⁹ Because the forecast for pension expense shows a negative growth rate over the prior 10 years, that line item is held flat in the extension through FY2052-53.

TABLE 2A –

Recoveries To Franklin And Ending Cash Balances Under Alternative Minimum Cash Scenarios Assuming Payments Through FY2040-41 (End of LRFP)

<i>(\$'s in thousands)</i>					
	Total Cash Payments (Discounted) (A) ⁽¹⁾	Outstanding Debt + Prepetition Interest (B)	Recovery ((A)/(B)) ⁽²⁾	City Ending Cash Balance ⁽³⁾	
5.00%	\$ 47,221	\$ 37,093	100.0%	\$	21,889
10.00%	35,174	37,093	94.8%		38,287
15.00%	22,259	37,093	60.0%		57,431
16.67%	19,092	37,093	51.5%		63,824
Notes:					
(1) Payments discounted at 5.0%					
(2) Assumes recovery capped at 100%. Discounted cash payments in excess of outstanding amount result from debt service accruing at the contract rate while payments are discounted at 5.0%.					
(3) Per the last year of the LRFP (FY 2040-41)					

TABLE 2B –

Recoveries To Franklin And Ending Cash Balances Under Alternative Minimum Cash Scenarios Assuming Payments Through FY2052-53

<i>(\$'s in thousands)</i>					
	Total Cash Payments (Discounted) (A) ⁽¹⁾	Outstanding Debt + Prepetition Interest (B)	Recovery ((A)/(B)) ⁽²⁾	City Ending Cash Balance ⁽³⁾	
5.00% ⁽⁴⁾	\$ 47,221	\$ 37,093	100.0%	\$	166,740
10.00%	55,548	37,093	100.0%		69,057
15.00%	44,139	37,093	100.0%		75,669
16.67%	40,592	37,093	100.0%		84,094
Notes:					
(1) Payments discounted at 5.0%					
(2) Assumes recovery capped at 100%. Discounted cash payments in excess of outstanding amount result from debt service accruing at the contract rate while payments are discounted at 5.0%.					
(3) As of FY 2052-53					
(4) Franklin is paid in full in FY2040-41 (same as in LRFP scenario)					

Taken together, the inclusion of an annual contingency in the LRFP, the adherence to a 15% minimum cash balance when 10% is consistent with the City's adopted policy (which itself is well in excess of the City's past practice), the diversion of cash to so-called "mission critical spending" once it reaches that 15% level, and the conservatism embedded in the City's LRFP obscure that the City is actually hoarding cash in its LRFP. That cash could be used to pay the City's obligations in respect of the Franklin Bonds.

C. The City Has The Ability To Utilize Public Facility Fees (“PFFs”) From Four Different Funds To Defray A Significant Portion, If Not All, Of The Amounts Owning In Respect Of The Franklin Bonds.

The proceeds of the Franklin Bonds paid for certain public facilities, and can be repaid by certain restricted funds (outside the general fund) that obtain revenues from building permit fees – or PFFs – for single family residences (“SFRs”). Those revenues can be used only for capital improvements within the purview of the applicable fund, or for repayment of the debt incurred to make such capital improvements. They cannot be used for general fund purposes. While the revenues in these funds are not pledged as security for the Franklin Bonds, they can be used for debt service on the Franklin Bonds in proportion to the share of the Franklin Bond proceeds they received. In fact, the City sold the Franklin Bonds with the expectation that PFFs would be sufficient to repay the Franklin Bonds in full.

The following table shows (1) the percentage of the Franklin Bonds debt service obligation allocated to each PFF fund, and (2) the respective SFR permit fees for those funds (in actual amounts)¹⁰:

TABLE 3 –
PFF Funds Available To Pay The Franklin Bonds

<u>Fund</u>	<u>Percentage of Total Franklin</u>	
	<u>Bonds Debt Service</u>	<u>Fee</u>
Streets (Funds 910-915)	34.05%	\$ 6,668
Fire Stations (Fund 940)	17.37%	781
Police Station (Fund 960)	12.37%	591
Parkland (Fund 970)	36.21%	2,798

For example, taking the Franklin Bonds’ debt service obligation of \$2.923 million for FY2013-14, the Streets Funds’ (Funds 910-915) allocation is approximately \$1.0 million (34.05% of \$2.923 million), and up to this amount of PFFs allocated to the Streets Funds could be devoted to debt service on the Franklin Bonds (if funds are available). Similarly, the allocation of the Parkland Fund (Fund 970) is approximately \$1.1 million (36.21% of \$2.923 million), meaning that up to \$1.1 million of PFFs allocated to the Parkland Fund could be used to repay the Franklin Bonds. Given that each fund is allocated a certain percentage of the Franklin Bonds’ debt service, and the percentage allocations and fees vary, a different number of permits is required for each of the respective funds to meet its respective cap. By way of example, approximately 650

¹⁰ All fee figures per documents provided by the City. Based on the June 6, 2013 Presentation to the City by Economic & Planning Systems, the fee for the Streets Funds is a temporary 50% reduction from the \$13,336 standard fee. I understand that reduction has been extended through 2014 (see V. Burke Tr. (3/18/14) at 82:17 (rough draft)).

SFR permits would need to be issued for the scheduled FY2013-2014 debt service on the Franklin Bonds of \$2.923 million to be fully covered by the PFFs (see Table 4 below).¹¹

Thus, the ability to pay the Franklin Bonds debt service from these funds is dependent upon the number of SFR permits. Such permits have significantly decreased in the wake of the housing crisis in the City. In the City's peak building years of FY2002-03, FY2003-04, and FY2004-05, SFR permits approached 3,000 per year. In FY2010-11, FY2011-12, and FY2012-13, the SFR permits were less than 100 per year (see Exhibit 7; FY2012-13 figure from FY2013-14 budget, page I-3).

However, even if permits remain at relatively low levels, the PFFs still could provide a meaningful contribution to the Franklin Bonds debt service. For example, even assuming that the City's 50% reduction in the amount of the Streets Fund fee continues indefinitely, and using current SFR permit fees, at just 100 SFR permits per year – the level achieved in each of the last three fiscal years – approximately \$1.1 million annually would be available for debt service on the Franklin Bonds, approximately \$1.8 million annually would be available at 200 SFR permits per year, and at 300 SFR permits per year approximately \$2.2 million annually would be available. The table below provides an illustration of potential PFF revenues under different SFR scenarios:

TABLE 4 –
PFF Funds Available To Pay The Franklin Bonds At Different Levels Of SFR Permits

FY 2013-14 Public Facility Fee Illustrative Example: Revenue Available for Franklin Debt Service (<i>\$ in actuals</i>)					
	Streets 910-915	Parkland 970	Fire 940	Police 960	Total
Applicable Fee:	\$ 6,668	\$ 2,798	\$ 781	\$ 591	\$ 10,838
Allocation (%)	34.1%	36.2%	17.4%	12.4%	100.0%
Cap (FY2013-14)	\$ 995,322	\$ 1,058,461	\$ 507,746	\$ 361,590	\$ 2,923,119
Units to Meet Cap	150	379	651	612	
Permits/Year:					
100	\$ 666,800	\$ 279,800	\$ 78,100	\$ 59,100	\$ 1,083,800
200	995,322	559,600	156,200	118,200	1,829,322
300	995,322	839,400	234,300	177,300	2,246,322
400	995,322	1,058,461	312,400	236,400	2,602,583
500	995,322	1,058,461	390,500	295,500	2,739,783
600	995,322	1,058,461	468,600	354,600	2,876,983
651	995,322	1,058,461	507,746	361,590	2,923,119

¹¹ The Fire Station (Fund 940) and Police Station (Fund 960) Funds reflect negative cash balances per the FY 2013-14 Budget of approximately \$2.4 million and \$1.3 million, respectively (see FY2013-14 Budget pages N22-23). Per the City's designated witness, these funds have negative balances because they borrowed from other funds and the amounts shown reflect the cash in the fund net of the liability (see V. Burke Tr. (3/18/14) at 73:18–75:24 and 93:1–9 (rough draft)).

Thus, even if SFR permits remain at historically depressed levels – and, as noted above, the City already is experiencing a real estate recovery, and the City’s LRFP itself notes that “a market absorption study for the City projects a long-term average of 700 *new units* annually” (see LRFP page 4) – the PFFs would still constitute a meaningful contribution to the Franklin Bonds debt service obligation under currently applicable fees if the City chose to use them to satisfy that obligation.

D. The City Has Not Undertaken Certain Revenue And Cost Initiatives That Could Improve Financial Performance.

Without dictating to the City how to conduct its affairs, there also would seem to be a number of potential opportunities for cost reduction and revenue enhancement that could improve financial performance of the City and thus generate additional funds for the payment of the Franklin Bonds. The following represents a small sample of potential opportunities.

1. Efficiency/Improved Cost Recovery.

In the LRFP, the City assumes \$2.5 million in Efficiency/Improved Cost Recovery in FY2014-15, and then an additional \$0.5 million in FY2016-17. For the rest of the entire 30-year projection period, the City forecasts *no* additional “efficiencies” or “improved cost recoveries.” Specifically, while the \$3.0 million figure for “Efficiency” appears every year in the LRFP, because of the way the LRFP is constructed the efficiency improvement is actually one-time (occurring in the first several years of the LRFP). This is because, unlike the \$2 million annual contingency (which provides a \$2.0 million cushion every year), the “efficiency” in a given year is not incorporated into the LRFP in the following years in the form of reduced costs. Thus the City is assuming a total of just \$3.0 million in one-time efficiency enhancements over the entire forecast period.

At a minimum, even if the City believes it cannot achieve any additional efficiency enhancements whatsoever, the projected \$3 million in savings should increase to reflect the inflation factors incorporated elsewhere in the LRFP (for example, the City has assumed a 2% COLA; see LRFP page 10). Applying the same 2% annual rate of increase, the \$3.0 million in projected savings increases to \$4.83 million by FY2040-41.

2. Subsidy To Entertainment Venues Fund.

Additionally, there are certain expenditures contemplated by the FY2013-14 Budget and the LRFP that are particularly difficult to justify given the City’s financial situation. In particular, the City’s FY2013-14 budget includes a shortfall between revenues and expenses in the “Entertainment Venues Fund” of approximately \$2.7 million, an amount roughly consistent with past years. The City subsidizes that shortfall through payments from the general fund. The chart below quantifies the revenues and expenses by category (Stockton Arena, Bob Hope Theater, Oak Park Ice Arena, Ballpark, and Other) for FY 2013-2014 Budget:

TABLE 5 –
General Fund Subsidies Of Entertainment Venues

FY 2013-14 Entertainment Venues Fund Budget: General Fund Transfer						
<i>(\$'s in thousands)</i>						
	Stockton Arena	Bob Hope Theater	Oak Park Ice Arena	Ballpark	Other	Total
Beginning Available Balance (A)						\$ 148
Revenues	\$ 3,258	\$ 468	\$ 409	\$ 220	\$ 62	\$ 4,416
Expenditures	4,568	877	638	666	259	7,008
Net Loss (B)	(1,310)	(409)	(229)	(446)	(198)	(2,591)
General Fund Transfer (C)						2,653
Ending Available Balance ((A)+(B)+(C))						\$ 210

These four facilities are managed by the City's facility management firm, SMG. The City states that these venues have historically required high subsidies, and that despite SMG's "efforts to increase revenues and reduce costs ... SMG has not achieved the savings anticipated due to declining ticket sales and revenue" (see FY2013-14 Budget page A-44). Notably, the LRFP does not forecast *any* reversal in general fund subsidies of the entertainment venues. Rather, the general fund subsidy increases at approximately a 2.8% annual rate over the duration of the LRFP, resulting in a \$5.4 million subsidy from the general fund in FY2040-41. Over the course of the LRFP, *general fund subsidies to the Entertainment Venues Fund total approximately \$123.7 million*, far more than is owed in respect of the Franklin Bonds.

Moreover, the "Golf Courses" subsidy in the LRFP constitutes an additional \$450,000 in FY2013-14 and an additional *\$21.2 million* over the course of the LRFP. Given that the City proposes to relinquish possession of the golf courses under the Plan, there will be no future subsidy and those funds also could be used to pay the City's obligations in respect of the Franklin Bonds.

VII. Opinion Two – Detailed Basis: The City Is Paying Other Creditors With Rights Similar To Those Held By Franklin Recoveries That Dramatically Exceed The Proposed *De Minimis* Recovery To Franklin In Respect of the Franklin Bonds.

In its Disclosure Statement and Plan, the City details settlements it has reached with the various other creditor constituencies and its proposed treatment of Franklin in the unsecured creditor class. In all instances, the payments to other "Capital Markets Creditors" and payments to other unsecured creditors (including retirees) dramatically exceed the payments the City proposes to make in respect of the Franklin Bonds.

A. Treatment Of Other Capital Markets Creditors.

The recovery figures in the table below are calculated using the claim amounts and payment schedules provided by the City, discounted at 5% (see Exhibit 8, Summary of Proposed Treatment of Creditor Constituencies).

TABLE 6 –
Selected Creditor Recoveries

Summary of Proposed Treatment of Capital Markets Creditors in Stockton's Proposed Plan of Adjustment		
Class	Name	Recovery (%)
1A, 1B	2003 Police/Fire/Library Certificates (Ambac)	106.4%
2	2006 SEB Bonds (NPFG)	100.0%
3	2004 Arena Bonds (NPFG)	96.7%
4	2004 Parking Structure Bonds (NPFG)	103.5%
5	2007 Office Building Bonds (Assured)(1)	53.9%
6	Pension Obligation Bonds (Assured)(2)	51.9%
Notes:		
(1) Calculation based on mid-point of Lee & Associates appraisal of 400 E. Main building dated as of July 20, 2012		
(2) Does not include any contingent note recoveries		

By comparison, the City proposes to pay Franklin a recovery of only 0.25% in its Plan. In its Disclosure Statement and Plan and related Plan Supplements, the City details the settlements it has reached with the various other creditor constituencies and its proposed inclusion of Franklin's alleged 502(b)(6)-limited claim in the unsecured creditor class. In all instances, the payments contemplated by the proposed settlements with the other "Capital Markets Creditors" dramatically exceed the current proposed treatment of Franklin.

It should be noted that these recovery comparisons are conservative as they only take into account general fund exposure, do not include additional contingent recoveries that might be received if the City's financial performance exceeds the LRFP, and do not include amounts currently in reserve funds. The NPFG Arena Bonds settlement, for example, lists a pledged tax increment and a general fund payment. The general fund payment is the minimum payment, but NPFG could receive up to the pledged tax increment if funds are available, thus increasing its recovery. The Assured Guaranty Pension Obligation Bonds settlement contains a provision for a contingent payment based on a complex formula involving the excess of the City's actual revenues over the forecast revenues compared to the revenue forecast that was contemplated when the Pension Obligation Bonds were issued. If the City meets the 0.5% increased annual revenue growth rate per

its example in the LRFP, the recovery on the Pension Obligation Bonds would increase by an estimated 11.7% to a total recovery of 63.6%. Similarly, the recovery on the Assured Guaranty 2007 Office Building Bonds is based on the mid-point of the Lee & Associates appraisal range of the 400 East Main Building dated as of July 20, 2012. Given recoveries in property values since that time, that figure would likely be higher now.

B. Treatment Of Retirees.

The City's overall treatment of retirees also dramatically exceeds the proposed recoveries to Franklin. The City attempts to justify its treatment of the Franklin Bonds by comparing it to the proposed recovery of less than 1% on account of claims for retiree health care. In fact, however, retirees as a whole fare far better under the Plan. Specifically, taking the retiree recoveries on claims for both retiree health care and pensions together, and using verified figures with respect to the City's health care and pension liabilities, the aggregate recovery for the 1,100 retirees holding claims for both health care and pension obligations is at least 53.4% of the claimed amounts (and for the 1,300 retirees holding only claims for pension obligations, the recovery is 100%). In fact, in the LRFP the City itself estimates the overall recoveries to retirees to be in excess of 70% (see LRFP page 11).

1. The City Has Inflated The Amount Of The Retiree Health Benefit Claims.

The City has stipulated to an allowed amount of Retiree Health Benefit Claims of \$545.9 million. The actual amount of the City's liability for retiree health care is substantially smaller.

The City produced a memorandum titled "Retiree Health Benefit Cost Analysis Explanation" for distribution to retiree health benefit claimants (see Exhibit 9). This memorandum is also summarized in the Notice of November 26, 2013 Bar Date for All Retiree Health Benefit Claims. It purports to explain the methodology used to calculate the City's \$545.9 million aggregate claim amount. Based on that explanation, and the testimony of the City's witnesses in deposition, it is clear that in calculating the allowed claim amount to which the City has stipulated that the City did not discount its future liability for retiree health care to present value. As described below, this is wholly inconsistent with the practice of the City actuary in prior actuarial valuations for the City, with the way the City reports its retiree health care liability in its audited financial statements, with the rules promulgated by the Government Accounting Standards Board, and with the most basic principles of corporate and governmental finance. Amazingly, when asked about the City's failure to apply a discounting methodology, the City's designated witness with respect to calculation of the Retiree Health Benefit Claims professed not even to understand the concept of present value. When asked whether \$1,000 was worth more today or 20 years in the future, she answered that "it depends on whether you have \$1,000 now or twenty years in the future."¹²

¹² See A. Goodrich Tr. (3/17/14) at 33:21–23 (rough draft).

In developing the stipulated \$545.9 million amount of the Retiree Health Benefit Claims, the City's actuary, Segal Company ("Segal"), generated a benchmark for FY2012-13 from actual retiree health care claims made during the previous 3 years. Segal then used that benchmark to extrapolate projected future health care costs over each retiree's lifetime, which could extend decades into the future, and then simply added up the total projected future health care costs to arrive at the aggregate claim amount of \$545.9 million. This is a patently invalid methodology.

Standard practice entails calculating the *present value* of future benefits based on forecasts of the actual benefits to be provided using standard actuarial data and assumptions regarding the costs of providing health care. This is precisely what Segal itself did in the actuarial valuation reports used to calculate the City's retiree health care liability for purposes of the City's audited financial statements (as described in more detail below). There is no basis for the abrupt and unexplained change in methodology in the bankruptcy case.

To start, it makes no sense simply to tally up projected future health care expenses payable over the next thirty years or more. The payment of a claim thirty years from now obviously is less of a burden than the payment of the same claim today. This is why generally accepted accounting principles dictate that future liabilities like retiree health care benefit costs be discounted to present value in order to provide an accurate representation of the liability in an entity's financial statements.

Moreover, it is inappropriate to extrapolate a projection of future liability from historical data. Projected future liabilities should be derived from forward-looking assumptions about the *future* costs of providing health care benefits. The backward-looking methodology used by Segal and the City in the bankruptcy case is particularly inappropriate here because, given the City's long, pre-bankruptcy period of financial distress and accompanying rumors of a bankruptcy filing, it is likely that there was heightened retiree use of health care benefits in recent years, as retirees likely expected such benefits to be cut off in a bankruptcy case (as in fact they were). This would have inflated the benchmark used by Segal to extrapolate future health care liabilities. Moreover, available mitigation opportunities were not applied to the City's calculation. While Segal apparently did account for retirees' eligibility for Medicare after age 65, it does not account for any potential mitigation provided by the Patient Protection and Affordable Care Act ("ACA").^{13 14}

Given that there are 1,100 applicable retirees, under the City's calculation the average amount owed to *each* retiree is approximately \$0.5 million. This is a staggering amount, and shows just how much the City has inflated its alleged liability in this regard.¹⁵

¹³ Ibid, 19:4-10.

¹⁴ While the Retirees Committee's designated witness stated that the reason for this was because the ACA did not become effective until January 1, 2014 (see D. Milnes Tr. (3/17/14) at 44:24-45:15 (rough draft)), it was signed into law on March 23, 2010; thus the City had ample time to incorporate its prospective impact.

¹⁵ Additionally, Stockton's OPEB liabilities are exceedingly high in comparison with peer cities. According to the City's figures, Stockton's per capita liability was \$1,409 versus a peer median of \$286, and as a percentage of payroll its annual required contribution was 30.8% versus a peer median of 6.8% (see "Ask" page 37 of 790).

2. The City's Pre-Bankruptcy Calculation Of Retiree Health Care Liability Reveals A More Accurate Calculation.

In the Actuarial Valuation and review of OPEB conducted by Segal for the City dated as of June 30, 2011, the unfunded actuarial accrued liability for retiree health care ("UAAL") as of June 30, 2011 was \$416.7 million. This liability is reported in the City's audited financial statements for the year ended June 30, 2012.

Of that \$416.7 million UAAL, approximately \$261.9 million was attributable to current retirees (with the balance attributable to liability for current employees). Segal discounted that liability to present value using a 4.5% discount rate. Segal's figure provides a good estimate of the magnitude of the City's error in using absolute dollar figures. It is clear that the City's UAAL, calculated correctly, would be nowhere near the \$545.9 million claim amount to which the City has stipulated.

3. Combined Retiree Recovery.

Even accounting for the elimination of the retiree health benefits, the combined recovery under the Plan to retirees with both health care and pension claims is at least 53.4%, based on the verifiable, available data described above. Specifically, while the City proposes to discharge all claims regarding retiree health care benefits for a total payment of \$5.1 million, the City proposes to leave unimpaired all pension benefits promised to retirees (see treatment of Class 15 in the Plan). For the City's pension liability, the latest available data is from the CalPERS June 30, 2012 valuation reports for the City's Safety and Miscellaneous Plans (dated as of October 2013, see attached Exhibits 10 and 11), which list an unfunded liability with a present value of \$258.4 million for the Safety Plan and \$153.4 million for the Miscellaneous Plan. These reports also show that, of the total present value of projected benefits, the total liability that is owing to current retirees is 71.3% in the case of the Safety Plan and 68.4% in the case of the Miscellaneous Plan. Applying these percentages to the unfunded liabilities yields a total retiree claim of \$289.2 million for the pension. Combined with the retiree health care claim of \$261.9 million, the combined claim of retirees is \$551.0 million. A 100% recovery on the CalPERS liability and \$5.1 million recovery on the retiree health care claims results in an overall recovery of 53.4% (see Exhibit 8).

C. Treatment Of Current Employees.

In the Disclosure Statement and other public statements, the City has emphasized the salary and benefit reductions accepted by current employees and new hires, implying that these should somehow be factored into the evaluation of the merits of the Plan.

The various changes that current employees have accepted for the most part reverse the City's prior largesse, and include requiring employees to pay the employee portion of the pension payment, eliminating employer paid member contribution-related spiking, and eliminating various other "add-pays" that have the effect of reducing compensation and therefore future pension benefits (see e.g., Declaration of Robert Deis in Support of City of Stockton's Reply to Objections, filed February 15, 2013, Docket 708). This may indeed

affect pensionable compensation and therefore future pension benefits as to *current employees*. It has nothing to do with recoveries of *current retirees*. Moreover, the impact is difficult to quantify and the imprecise percentage impact ranges that the City asserts (“30-50%” in retirement benefits and “up to 30%” in compensation) are not clearly defined and not supported by any details (see Disclosure Statement page 83 footnote 15). The fact remains that the City proposes to meet 100% of its obligations to CalPERS for both retirees and current employees and, prior concessions notwithstanding, to the extent current employees are part of a class it is the class of CalPERS Pension Claims (Class 15), which the Plan proposes to pay in full. More to the point, changes in compensation and benefits for current employees have nothing to do with the treatment of claims of existing retirees under the Plan.

Similarly, new hires are not part of any class, and discussing “reductions” for new hires does not make sense. They are new employees and are entering a new system. The fact that it is less generous than the old regime does not make it a “reduction of 50-70%” (see Disclosure Statement page 83 footnote 15). It is just a new contract structure that they have willingly entered with full knowledge of the terms.

Additionally, there is a crucial distinction between actual prepetition claims, such as Franklin’s, and those of current employees, whose claims are partially in the future. Any reductions for current employees can be recovered at any time. Employees are under a one-year collective bargaining agreement, and the terms of their employment can and will be renegotiated. They are thus in a totally different position than Franklin, which faces the prospect of a permanent impairment under the Plan.

VIII. Opinion Three – Detailed Basis: Pension Obligations, Particularly For The Safety Plan, Are Very High, Growing And Unpredictable.

The City’s contribution rates to CalPERS for Stockton’s Safety Plan are forecast to grow to seemingly unprecedented levels, are well in excess of the contribution rates of peer cities, and are increasing each year. These obligations are not only rapidly increasing, but they are also out of the City’s control. In the LRFP, the City’s pension expense is forecast to grow from 10.0% of general fund expenditures in FY2012-13 to 18.8% in 2024-25. Assuming without modification such an unmanageable and unpredictable obligation creates risks to the City’s long-term financial viability and is inconsistent with the City’s assertion that it cannot afford to pay more than approximately \$94,000 in respect of the Franklin Bonds.

A. The City’s Contribution Rates Are Well Above Peer Cities And Are Forecast To Grow Rapidly.

The City’s forecasted Safety Plan contribution rates, expressed as a percentage of payroll, are significantly above those of peer cities (See Exhibit 12; CA cities between 200k – 500k population). For FY2013-14, the City’s contribution rate is 34.6% and the peer average is 30.9%. From FY2014-15 through the end of the forecast period in FY2019-20, the City’s contribution rate is the second-highest among the peer-group (second only to Santa Ana). While the contribution rates are forecast to increase over time for all of the peer

cities, for the City they increase at a faster rate, reaching 57.1% in 2019-20 vs. the forecast peer average in that year of 45.1%. Not only is the City's contribution rate well-above its peers, but it is forecast to become even more of an outlier over time.

B. CalPERS' Estimated Contribution Rates Are Increasing From Year To Year.

The CalPERS estimated contribution rates, as a percentage of payroll, have tended to increase year over year. This makes it difficult for cities to plan, but the challenge is particularly vexing when contribution rates are already at lofty levels, as with the City's Safety Plan. For example, in the 2010 CalPERS valuation report, the forecast contribution rate for 2016-17 was 34.6%; this increased to 40.6% in the 2011 CalPERS valuation report, and further increased to 47.7% in the 2012 CalPERS report. The chart below illustrates this trend:

TABLE 7 –

Summary Comparison Of CalPERS Projections Of City Pension Contributions As A Percentage Of Payroll

Year over Year CalPERS Summary of Employer Contribution Rate Analysis

Safety Plan

	2013-14	2014-15	2015-16	2016 -17	2017-18	2018-19	2019-20
Stockton (6/30/10 CalPERS Report)	32.50%	33.20%	33.90%	34.60%	ND	ND	ND
Stockton (6/30/11 CalPERS Report)	34.61%	38.90%	39.80%	40.60%	41.40%	ND	ND
Increase Year over Year	2.11%	5.70%	5.90%	6.00%	NM	NM	NM
Stockton (6/30/12 CalPERS Report)	34.61%	41.39%	44.50%	47.70%	50.80%	54.00%	57.10%
Increase Year over Year	NM	2.49%	4.70%	7.10%	9.40%	NM	NM
Increase from 6/30/10 to 6/30/12	2.11%	8.19%	10.60%	13.10%	NM	NM	NM

Miscellaneous Plan

	2013-14	2014-15	2015-16	2016 -17	2017-18	2018-19	2019-20
Stockton (6/30/10 CalPERS Report)	17.40%	17.90%	18.40%	18.80%	ND	ND	ND
Stockton (6/30/11 CalPERS Report)	17.94%	19.60%	20.20%	20.80%	21.40%	ND	ND
Increase Year over Year	0.54%	1.70%	1.80%	2.00%	NM	NM	NM
Stockton (6/30/12 CalPERS Report)	17.94%	20.09%	22.20%	24.30%	26.40%	28.60%	30.70%
Increase Year over Year	NM	0.49%	2.00%	3.50%	5.00%	NM	NM
Increase from 6/30/10 to 6/30/12	0.54%	2.19%	3.80%	5.50%	NM	NM	NM

Source: CalPERS website (www.calpers.ca.gov); note: "ND" means not disclosed in Annual Valuation Report

These types of year-over-year Safety Plan increases were reflected across the board for all observed cities from the 2011 to the 2012 valuation reports. For example, in the 2011 CalPERS report the FY2017-18

forecast was 41.4% for the City and 34.6% for the average; in the 2012 CalPERS report, the forecast for FY2017-18 increased to 50.8% for the City and 40.6% for the average (see Exhibit 12). Thus, the City's Safety Plan contribution percentages are not only increasing dramatically, but are unpredictable and literally out of the City's control. Additionally, the contribution rates are extremely high on a historical basis. For reference, the City's contribution rate in FY2008-09 was 21.5% (per the 2010 valuation report); the City's highest reported historical rate among the documents received was 34.7% in FY2005-06 (per the 2007 valuation report). As the above chart indicates, many of these same trends apply to the Miscellaneous Plan, but the increases are more moderate and the nominal rates are lower.

The City does appear to have attempted to factor anticipated increases in the CalPERS contribution rates into the LRFP. The LRFP backup provided to the City by Segal, for example, shows a contribution rate for the Safety Plan of 53.8% for FY2015-16 versus the 44.5% figure in the CalPERS forecast from the FY2012 CalPERS valuation report. For the Miscellaneous Plan, the City's forecast contribution rate for FY2015-16 is 27.5% versus the 22.2% figure in the CalPERS report. By 2019-20, however, the Segal forecast contribution rate figures are lower than the comparable CalPERS figure for the Safety Plan, as shown by the table below (see also Exhibit 13).

TABLE 8 –
Comparison Of CalPERS And City Projections Of Future Pension Liability

Comparison of CalPERS Contribution Rate Forecast and LRFP (per Segal)

Safety Plan

	2013-14	2014-15	2015-16	2016 -17	2017-18	2018-19	2019-20
Stockton (Per CalPERS 6/30/12 Valn)	34.61%	41.39%	44.50%	47.70%	50.80%	54.00%	57.10%
Stockton (Per Segal Adjustments)	34.61%	41.39%	53.75%	55.66%	55.32%	55.69%	56.03%
Difference	0.00%	0.00%	9.25%	7.96%	4.52%	1.69%	-1.07%

Miscellaneous Plan

	2013-14	2014-15	2015-16	2016 -17	2017-18	2018-19	2019-20
Stockton (Per CalPERS 6/30/12 Valn)	17.94%	20.09%	22.20%	24.30%	26.40%	28.60%	30.70%
Stockton (Per Segal Adjustments)	17.94%	20.09%	27.52%	29.26%	30.95%	32.73%	34.51%
Difference	0.00%	0.00%	5.32%	4.96%	4.55%	4.13%	3.81%

Source: CalPERS website (www.calpers.ca.gov) and LRFP spreadsheet

Moreover, as noted, the 2012 CalPERS valuation report represents a substantial increase in contribution rates over 2011, which in turn represented a substantial increase over 2010. So while the City has attempted to anticipate some future increases in the CalPERS contribution rates, history suggests that the City is unable accurately to predict the CalPERS Safety Plan contribution rate, and by FY2019-20 the City's forecast is

actually lower than the forecast contained in the most recent CalPERS valuation report (as shown in the table above). If future increases in the contribution rate rise above what the City has forecast, it could call the feasibility of the Plan and future viability of the City into question.

C. Pension Expense As A Percentage Of General Fund Expenditures Is Unsustainably High.

The City's forecast pension expenditure as a percentage of total general fund expenditures is also unsustainably high. For FY2012-13, the City projected in its LRFP that pension expenses would constitute approximately 10.0% of its general fund. However, the rapid growth in the City's projected pension expense, as noted above, results in this figure increasing to 18.1% in just six years (FY2018-19). The projected pension expense then remains above 18.0% for the next twelve years (until FY2030-31) and above 16.0% until FY2034-35 (see Exhibit 14). From a historical perspective, these figures are extremely high. From FY1998-1999 (as far back as data was readily available) through FY2011-12, the City's pension expense as a percentage of total general fund expenditures averaged approximately 9.6%, with a low of 2.7% in FY2001-02 and a high of 16.2% in FY2005-06 (see Exhibit 15).

D. Vallejo's Failure To Contain Pension Expenses Presents A Cautionary Tale.

The City of Vallejo ("Vallejo") is facing another budget crisis less than two years after exiting bankruptcy, providing a case study in the risks of failing to address pension obligations while in Chapter 9. Vallejo projects budget deficits for this fiscal year and next (FY2013-14 and FY2014-15), with ballooning obligations to CalPERS a key part of the challenge, and a dwindling cash balance of approximately 4.5% of general fund expenditures (for FY 2013-14; see Exhibit 16). Vallejo's CalPERS Safety Plan contribution rate for FY2014-15 is 50.8% (compared to 41.4% for the City and a 37.9% peer average), and is forecast to grow to 65.5% in FY2019-20 (compared to 57.1% for the City and a 48.5% peer average) (see Exhibit 17).¹⁶ Vallejo's Safety Plan contribution rate is higher than all of the peer cities for FY2014-15 and second only to El Monte in FY2019-20. Vallejo's forecast CalPERS contribution rates, as well as Stockton's CalPERS and Segal contribution rates, are shown on the table below.

¹⁶ Peer group for Vallejo includes California cities with populations of 110,000 – 130,000.

TABLE 9 –

Summary of Employer Contribution Rate Analysis (Stockton (Segal and CalPERS) and Vallejo (CalPERS))

<u>Annual Valuation Report</u>					<u>Projected</u>					
<u>Contribution Rate -Safety Plan</u>										
<u>Cities/Reports</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>2013-14</u>	<u>2014-15</u>	<u>2015-16</u>	<u>2016-17</u>	<u>2017-18</u>	<u>2018-19</u>	<u>2019-20</u>
Stockton - Segal per 9-11-13 forecast	23.271%	29.099%	31.790%	34.605%	41.385%	53.750%	55.660%	55.320%	55.690%	56.030%
Stockton - CalPERS as of June 30, 2012	23.271%	29.099%	31.790%	34.605%	41.385%	44.500%	47.700%	50.800%	54.000%	57.100%
Vallejo - CalPERS as of June 30, 2012	32.564%	37.558%	42.264%	47.421%	50.838%	53.800%	56.700%	59.600%	62.600%	65.500%

<u>Annual Valuation Report</u>					<u>Projected</u>					
<u>Contribution Rate -Miscellaneous Plan</u>										
<u>Cities/Reports</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>2013-14</u>	<u>2014-15</u>	<u>2015-16</u>	<u>2016-17</u>	<u>2017-18</u>	<u>2018-19</u>	<u>2019-20</u>
Stockton - Segal per 9-11-13 forecast	14.087%	16.941%	16.881%	17.939%	20.090%	27.520%	29.260%	30.950%	32.730%	34.510%
Stockton - CalPERS as of June 30, 2012	14.087%	16.941%	16.881%	17.939%	20.090%	22.200%	24.300%	26.400%	28.600%	30.700%
Vallejo - CalPERS as of June 30, 2012	18.421%	22.900%	24.762%	28.144%	30.228%	32.000%	33.700%	35.400%	37.100%	38.900%

Like the City, Vallejo also has found it difficult to accurately forecast its pension expense. Actual expenses and the current forecast are materially higher than the forecast in Vallejo's Disclosure Statement filed in January of 2011. The chart below compares the actual pension expense and the current forecast with the forecast in Vallejo's Disclosure Statement. The anticipated increases over the Disclosure Statement amounts are 37.8% in FY2013-14 and 36.2% in FY2014-15.

TABLE 10 –

Vallejo's Disclosure Statement Pension Forecast vs. Current Budget


City of Vallejo				
Pension Costs Analysis				
(\$'s in thousands)				
	FY 11-12 ⁽¹⁾	FY 12 -13 ⁽²⁾	FY 13 - 14	FY 14-15
Pension (2013-2014 Adopted Budget) (A)	\$ 10,441	\$ 12,381	\$ 14,228	\$ 14,517
Pension (11/10/10 Forecast in Disclosure Statement) (B)	9,685	10,000	10,325	10,660
Increase from previous forecast [(A)-(B)]	\$ 756	\$ 2,381	\$ 3,903	\$ 3,857
Increase from previous forecast - %	NA	23.8%	37.8%	36.2%
Notes				
(1) Unaudited				
(2) Adopted Budget				

Additionally, based on Vallejo's budget forecast, pension expense as a percentage of total general fund expenditures increases to 20.6% for FY2016-17, and remains over 20% through the end of the forecast period (FY2018-19) (see Exhibit 16). Vallejo's failure to implement measures to reduce and control its pension obligations through its bankruptcy increases the likelihood that it may face a "Chapter 18." This presents a troubling precedent for the City which, like Vallejo, proposes to squander the opportunity to restructure pension liability in its Chapter 9 case.

SUMMARY

Based on the foregoing, I believe that Franklin's proposed treatment under the Plan is inadequate. If the City's forecast in the LRFP is accurate, and even more so if it is "conservative" as the City frequently asserts in the LRFP, there will be sufficient cash build-up to pay all, or a significant portion, of the amounts owing on the Franklin Bonds. Similarly, availability of substantial additional PFF revenue to pay debt service on the Franklin Bonds makes the proposed treatment of the Franklin Bonds even less appropriate. Additionally, Franklin's *de minimis* recovery under the Plan is dramatically lower than the substantial recoveries agreed to in the settlements with the other "capital markets creditors" and retirees. Finally, the City's pension obligations, particularly with respect to the Safety Plan, present a large and growing obligation that the City makes no effort to contain via its Plan. It is not consistent that the City can afford to pay its pension obligations without impairment, but not the much smaller obligation on the Franklin Bonds.

Respectfully Submitted,

A handwritten signature in dark ink, appearing to read "Chas M Moore". The signature is fluid and cursive, with the first name "Chas" and last name "Moore" clearly distinguishable.

Charles M. Moore

March 26, 2014

Exhibits

EXHIBIT 1

CHARLES M. MOORE, CPA, CFF, CTP

Senior Managing Director
Conway MacKenzie, Inc.
401 S. Old Woodward
Suite 340
Birmingham, MI 48009
(248) 433-3100
cmoore@conwaymackenzie.com

PROFESSIONAL EXPERIENCE

Oct. 2001 to present **Senior Managing Director & Shareholder**
Conway MacKenzie, Inc., Birmingham, Michigan

Areas of Specialization Include:

- Providing turnaround consulting and performance improvement services to underperforming organizations in the automotive, construction, distribution, gaming, governmental, healthcare, manufacturing and real estate industries;
- Leading the Firm's Governmental Services Group, focused on providing financial and operational advisory services to governmental and non-profit organizations and their constituents, including creditors and unions;
- Performing financial and operational assessments of companies on behalf of investors, creditors and customers, including assessments of financial viability, systems and processes, management capability and competitive positioning;
- Providing transactional guidance and support to buyers and sellers of companies, including performing due diligence, defining post-acquisition processes and systems, and assisting with post-acquisition integration;
- Developing financial models for use in forecasting cash flow and operating resource needs;
- Negotiating and executing debt restructuring and reorganization transactions in both out-of-court and formal bankruptcy filing settings;
- Providing expert testimony in matters involving insolvency and commercial disputes; and
- Serving as or providing financial advisory services to fiduciaries, including Trustees and Receivers.

Feb. 2000 to Oct. 2001 **Chief Financial Officer**
Horizon Technology LLC, Taylor, Michigan

Areas of Responsibility Included:

- Supervised and directed the finance and information systems departments for a privately held \$50 million diversified company, consisting of cold form manufacturing, retail, real estate and travel operations;
- Managed relationships with multiple secured lenders for a variety of credit facilities.
- Developed cash forecasts, financial projections and operating budgets and monitored actual performance against budget; and
- Identified and implemented cost reduction initiatives to improve operating performance.

Charles M. Moore, CPA, CFF, CTP
Page: 2

Aug. 1994 **Manager**
to Feb. 2000 Management Solutions & Services
Deloitte & Touche LLP, Detroit, Michigan

Areas of Responsibility Included:

- Provided project management and consulting services on over 40 process improvement and technology implementation projects, including financial, manufacturing and distribution processes and applications;
- Served as Co-Project Manager of a global firm-wide initiative to rewrite Deloitte & Touche's methodologies and toolsets for implementing packaged ERP applications, incorporating business process redesign with rapid rollout. Responsible for all final deliverables and supervision of approximately 30 staff personnel; and
- Speaker at numerous conferences regarding the use of technology in profit enhancement initiatives.

EDUCATION

M.B.A., Professional Accounting, with emphasis in Accounting Information Systems - Michigan State University
B.A., Accounting - Michigan State University

PROFESSIONAL ORGANIZATIONS & COMMUNITY INVOLVEMENT

Former Board Member & President - Turnaround Management Association, Detroit Chapter
Trustee - Oakland County Bar Foundation
Trustee - Haven
Member - American Bankruptcy Institute
Member - American Institute of Certified Public Accountants
Member - Michigan Association of Certified Public Accountants

AWARDS & ACHIEVEMENTS

Selected as one of "40 in their 40s" by *M&A Advisor*, a national organization - 2011
Selected to the 2008 class of "40 Under 40" by *Crain's Detroit Business*
Appointed in December 2007 by the Speaker of the House and Senate Majority Leader to the Legislative Commission on Government Efficiency, a nine-member panel formed to study ways for the State of Michigan to cut costs and become more efficient
Named one of twelve "People to Watch – 2006" by *Turnarounds & Workouts*, a national publication
Lead restructuring professional for Greektown Casino & Hotel, which was awarded the "Chapter 11 Reorganization of the Year (\$100 million plus) - 2010" award by Turnaround Atlas Awards
Lead restructuring professional for Hastings Manufacturing Company, which was selected as "Transaction of the Year – 2006" by the Detroit Chapter of the Turnaround Management Association

Charles M. Moore, CPA, CFF, CTP

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EXPERT & FACT WITNESS DEPOSITION & TRIAL TESTIMONY DURING PAST FOUR YEARS

- City of Detroit, Michigan, U.S. Bankruptcy Court
Eastern District of Michigan (Multiple times - 2013)
- General Motors Corporation, et al. v. Weber Automotive Corporation, et al., U.S.
District Court, Eastern District of Michigan (2012)
- Cynergy Data, LLC, U.S. Bankruptcy Court
District of Delaware (2011)
- Greektown Holdings, LLC, et al., U.S. Bankruptcy Court
Eastern District of Michigan (2008 – 2012)

ARTICLES WRITTEN DURING PAST TEN YEARS

- None

STATEMENT OF COMPENSATION

Conway MacKenzie, Inc. is being compensated at its usual and customary billing rates for all work performed based on actual hours incurred and for any out-of-pocket expenses. These rates range from \$135 per hour for staff working under my direction to \$695 per hour for my time. Conway MacKenzie, Inc.'s compensation is not in any way dependent upon the outcome of the case.

EXHIBIT 2

Documents Reviewed

- Revised Long Range Financial Plan of the City of Stockton (EX2006).
- Soft copy excel version of the Revised Long Range Financial Plan of the City of Stockton (received 3/14/14).
- Disclosure Statement With Respect to Plan for the Adjustment of Debts of City of Stockton, California (October 10, 2013) [Docket No. 1134].
- Modified Disclosure Statement With Respect to the First Amended Plan for the Adjustment of Debts of City of Stockton, California (November 15, 2013) [Docket No. 1215].
- Plan of Adjustment of Debts of City of Stockton, California (October 10, 2013) [Docket No. 1133].
- First Amended Plan for the Adjustment of Debts of City of Stockton, California (November 15, 2013) [Docket No. 1208].
- Plan Supplement in Connection with the First Amended Plan for the Adjustment of Debts of City of Stockton, California (November 15, 2013) [Docket No. 1236].
- Supplemental Plan Supplement in Connection with the First Amended Plan for the Adjustment of Debts of the City of Stockton, California (November 15, 2013) [Docket No. 1259].
- Declaration of Vanessa Burke in Support of City of Stockton's Statement of Qualifications Under Section 109(c) of the United States Bankruptcy Code (EXS 1062-1372).
- Declaration of Norman C. Hile in Support of City of Stockton's Statement of Qualifications Under Section 109(c) of the United States Bankruptcy Code [Docket No. 717].
- Declaration of David Lamoreaux in Support of CalPERS Brief in Support of the City of Stockton's Petition [Docket No. 713].
- Deposition Transcript of David Lamoreux 30(b)(6), November 16, 2012.
- Declaration of Michael L. Lubic in Support of CalPERS' Brief in Support of the City of Stockton's Petition [Docket No. 712].
- CalPERS' Brief in Support of the City of Stockton's Petition [Docket No. 711].
- Bond Indenture \$35,080,000 Stockton Public Financing Authority Lease Revenue bonds, 2009 Series A (Capital Improvement Projects) (EX2515).
- Annual Budget City of Stockton 2008-2009.
- Annual Budget City of Stockton 2009-2010.
- Annual Budget City of Stockton 2010-2011.
- Annual Budget City of Stockton 2011-2012.
- Annual Budget City of Stockton 2012-2013.

- Annual Budget City of Stockton 2013-2014.
- Management Partners Draft 4/18/12 Memorandum and notes regarding CalPERS Benefit Information Comparison (EX165; STOCK063630-41).
- Management Partners Draft 4/24/12 City of Stockton CalPERS Benefit Information Comparison (EX159; STOCK059795-801).
- Management Partners Draft 8/29/12 Defined Benefit Retirement Comparative Analysis (EX118; STOCK048087-059801).
- Management Partners Draft 4/11/12 (v.3) City of Stockton PERS Benefit Information (EX157; STOCK059782-86).
- Timing of Various Agreements with the City (EX138; STOCK056835-036).
- Agency Pension Information – Miscellaneous (EXS141-145).
- Agency Pension Information – Safety (EXS146-149).
- Preliminary Summary of Pension Reform Provisions (EX185; STOCK089572-75).
- Employee Contribution to CalPERS (EX177; STOCK076820-21).
- CalPERS Retirement Enhancements (EX122; STOCK049208-09).
- CalPERS Misc Retirement Survey (EX115; STOCK045311).
- City-Owned Property List May 2012 (EX303).
- Concession Summary (EX151).
- City Bankruptcy Update – State-Approved Pension Changes (EX119; STOCK049138)
- General Fund Budget Projection for Fiscal Years 2011-12 through 2015-16 (11-10-10 Draft) (EX110).
- Summary of Public Employees’ Pension Reform Act of 2013 and Related Changes to the Public Employees’ Retirement Law Dated as of November 27, 2012 (www.calpers.ca.gov).
- Local Revenue Measures in California November 2012 Results dated January 9, 2013 (www.californiacityfinance.com).
- Summary of CalPERS Legal Position in Municipal Bankruptcies dated 9/12/12 (www.calpers.ca.gov).
- Vested Rights of CalPERS Members, Protecting the Pension Promises made to Public Employees dated July 2011 (www.calpers.ca.gov).
- CalPERS Safety Plan of the City of Stockton, Annual Valuation Report as of June 30, 2012 (CTY001260-326).
- CalPERS Safety Plan of the City of Stockton, Annual Valuation Report as of June 30, 2011 (EX423).
- CalPERS Safety Plan of the City of Stockton, Annual Valuation Report as of June 30, 2010 (EX25).
- CalPERS Miscellaneous Plan of the City of Stockton, Annual Valuation Report as of June 30, 2012 (CTY001193-259).

- CalPERS Miscellaneous Plan of the City of Stockton, Annual Valuation Report as of June 30, 2011 (EX422).
- CalPERS Miscellaneous Plan of the City of Stockton, Annual Valuation Report as of June 30, 2010 (EX25).
- CalPERS Safety Plan of the City of Vallejo, Annual Valuation Report as of June 30, 2012.
- CalPERS Miscellaneous Plan of the City of Vallejo, Annual Valuation Report as of June 30, 2012.
- Disclosure Statement With Respect to the Plan for the Adjustment of Debts of the City of Vallejo, filed January 18, 2011.
- City of Vallejo Adopted Budget, Fiscal Year 2013-14.
- Letter from Office of State Controller to Bob Deis, Stockton City Manager dated August 5, 2013.
- Letter from Bob Deis, Stockton City Manager to Mr. Steven Mar, State Controller's Office, dated July 11, 2013.
- Stockton Redevelopment Agency Asset Transfer Review Report, January 1, 2011 through January 31, 2012 dated as of August 2013.
- Declaration of Ann Goodrich in Support of City of Stockton's Statement of Qualifications Under Section 109(c) of the United States Bankruptcy Code (EX1051).
- Supplemental Declaration of Ann Goodrich in Support of City of Stockton's Statement of Qualifications Under Section 109(c) of the United States Bankruptcy Code (EX1373).
- Declaration of Ann Goodrich in Support of City of Stockton's Reply to Objections to its Statement of Qualifications Under Section 109(c) of the United States Bankruptcy Code (EX1384).
- Declaration of Teresia Haase in Support of City of Stockton's Statement of Qualifications Under Section 109(c) of the United States Bankruptcy Code (EX1052).
- Declaration of Teresia Haase in Support of City of Stockton's Reply to Objections to its Statement of Qualifications Under Section 109(c) of the United States Bankruptcy Code (EX1382).
- Deposition Transcript of Teresia Haase dated November 14, 2012.
- Deposition Transcript of Nancy Zielke dated January 31, 2013.
- Declaration of Robert Bobb in Support of Supplemental Objection of Assured Guaranty Corp. and Assured Guaranty Municipal Corp. to Debtor's Chapter 9 Petition and Statement of Qualifications, including Exhibits A and B attached thereto [Docket Nos. 641-42].
- Declaration of Nancy Zielke in Support of Supplemental Objection of Assured Guaranty Corp. and Assured Guaranty Municipal Corp. to Debtor's Chapter 9 Petition and Statement of Qualifications including Exhibits A and B attached thereto [Docket Nos. 639-40].

- Declaration of Robert Deis in Support of City of Stockton's Reply to Objections to its Statement of Qualifications Under Section 109(c) of the United States Bankruptcy Code (EX1377).
- Declaration of Michael Locke in Support of City of Stockton's Statement of Qualifications Under Section 109(c) of the United States Bankruptcy Code (EXS47-48).
- Declaration of Eric Jones in Support of Stockton's Statement of Qualifications Under Section 109(c) of the United States Bankruptcy Code (EX1061).
- Declaration of David Neumark in Support of National Public Finance Guarantee Corporation's and Assured Guaranty Corp.'s Supplemental Objection to the City of Stockton's Qualifications Under Section 109(c) of the United States Bankruptcy Code [Docket No. 637].
- Declaration of Joseph E. Brann in Support of Supplemental Objection of Assured Guaranty Corp. and Assured Guaranty Municipal Corp. to Debtor's Chapter 9 Petition, including Exhibits A and B (Brann's Expert Report) attached thereto (EXS1002-04).
- Declaration of Eric Jones in Support of Stockton's Reply to Objections to its Statement of Qualifications Under Section 109(c) of the United States Bankruptcy Code (EX1379).
- Opinion Regarding Chapter 9 Order for Relief [Docket No. 950].
- Transcript of Proceedings Before the Honorable Christopher M. Klein, April 1, 2013, pages 544-596 Filed June 12, 2013.
- City's Memorandum of Law in Support of Confirmation of First Amended Plan for the Adjustment of Debts of City of Stockton, California (November 15, 2013) [Docket No. 1243].
- Declaration of Justin McCrary in Support of City of Stockton's Reply to Objections to its Statement of Qualifications Under Section 109(c) of the United States Bankruptcy Code (EX1378).
- Declaration of David Millican in Support of City of Stockton's Statement of Qualifications under Section 109 (c) of the Bankruptcy Code (EXS49-50).
- Segal Forecast Rate Assumptions (CTY073769-77).
- City Council Agenda Item 15.3: FY2012-14 4th Quarter General Fund Update (CTY257654-68).
- City Council Agenda Item 15.4: FY2013-14 1st Quarter General Fund Update and Authorization to Amend the FY2013-14 Budget (CTY257669-78).
- City Council Agenda Item 15.1: Measure A&B Implementation – Phase I (CTY257679-89).
- Revised HdL Property Tax Forecast (CTY257690-93).
- HR Report Presentation, presented by Teresia Haase, June 4, 2013 2013-14 Budget Study Sessions (CTY063383).
- 2012-13 Property Tax Projection Recommendation; Memo from David Millican to Robert Deis (CTY024379–81).

- Stockton AP Reconciliation Spreadsheet as of 4/22/13 for FY2011-12 (CTY246746).
- GFOA Best Practices Appropriate Level of Unrestricted General Fund Balance (www.gfoa.org).
- Deposition Transcript of Robert Leland (rough) dated 3/7/14.
- Deposition Transcript of Ann Goodrich (rough) dated 3/17/14.
- Deposition Transcript of Steven Chase (rough) dated 3/19/14.
- Deposition Transcript of Vanessa Burke (rough) dated 3/18/14.
- Deposition Transcript of Dwane Milnes (rough) dated 3/17/14.
- Deposition Transcript of Kurt Wilson (rough) dated 3/18/14.
- Motion for Approval of Settlement with Ambac Assurance (EX2066).
- Declaration of Robert Deis in Support of Motion for Approval of Settlement with Ambac Assurance [Docket No. 725].
- City of Stockton Building Permit History; document dated as of 6/07/12 (EX2076).
- PFF Projected Fee Revenue and Debt Service Capacity (EX2020).
- City of Stockton Development Impact Fee Review Report, presented by Economic & Planning Systems (EX2021; CTY133489-602).
- Appraisal of 400 E. Main Street by Lee & Associates, dated 7/20/2012 (ASRD-01-0010283-359).
- 400 E. Main Street 2014 Budget Summary (ASRD-01-0010265-68).
- 400 E. Main Street December 2013 Monthly Operating Report (ASRD-01-0010270-82).
- Retiree Healthcare Plan Actuarial Valuation as of 6/30/11 by Segal (EX2056).
- Actuarial Valuation of Other Post-Employment Benefits (STOCK044539).
- City of Stockton Annual Report as of 6/30/12 dated 3/27/13 by Segal (CTY020636-44).
- Management Partners CalPERS and OPEB Chart (EX343; STOCK016002).
- Comparison of OPEB Liabilities (STOCK077591).
- List of Retirees and Cost by Name (CTY001332-57).
- Retiree Health Benefit Cost Analysis Explanation (CTY001188-92).
- City of Stockton 2011-12 Comprehensive Annual Financial Report.
- City of Stockton Summary of Salary and Employee Benefit Expense (EX120; STOCK049174).
- Comparative Salary and PERS Benefit Data for Stockton PD and Comparable Cities (EX543; STOCK210765).
- Tally of Officers Leaving from 2008-Feb 21, 2031 (EX545; STOCK210774).
- Experience Level of Current Police Staff (EX544; STOCK21076).

- City of Stockton OPEB Valuation (60 year cash flow based on OPEB valuation as of June 30, 2011) (CTY109655-56).
- Memorandum to City of Stockton Retirees receiving Retiree Medical (CTY122562-65).
- Segal City of Stockton Annual Report as of June 30, 2011 (STOCK076276-85).
- Segal City of Stockton Annual Report as of June 30, 2010 (STOCK024582-91).
- Segal City of Stockton Annual Report as of June 30, 2012 (CTY0200635-44).
- Bartel Associates LLC City of Stockton June 30, 2009 Actuarial Valuation (STOCK057832-83).

EXHIBIT 3

City of Stockton
 Exhibit 3 - Minimum Cash 5% of Total Expenditures
 Year Ended June 30 each respective period
 (\$'s in millions)

GENERAL FUND

	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
Adjusted Cash Forecast											
Ending Available Balance (per City)	-	3.07	9.75	21.16	20.05	20.78	21.55	21.23	20.53	19.13	18.31
<u>Adjustments:</u>											
Subtract: Cumulative Debt Service Payments (prior years)	-	-	-	(3.72)	(10.03)	(12.95)	(15.87)	(18.79)	(21.71)	(23.31)	(23.61)
Add: Cumulative Contingency (\$2.0 million every year)	-	-	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
Adjusted Ending Available Cash Balance (pre-Debt Service)	-	\$ 3.07	\$ 11.76	\$ 21.44	\$ 16.02	\$ 15.83	\$ 15.68	\$ 14.43	\$ 12.82	\$ 11.82	\$ 12.69
Debt Service Payment (A)	-	-	3.72	6.31	2.92	2.92	2.92	2.92	1.60	0.31	0.89
Ending Available Cash Balance after Debt Service Payment ⁽¹⁾	-	\$ 3.07	\$ 8.03	\$ 15.13	\$ 13.10	\$ 12.91	\$ 12.76	\$ 11.52	\$ 11.22	\$ 11.51	\$ 11.81
Regular Debt Service Payment ⁽²⁾	\$ 1.21	\$ 2.42	\$ 2.92	\$ 2.93	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.91
Debt Service Calculation											
Total Amount Owed - Beginning Balance	-	\$ 1.21	\$ 3.71	\$ 3.16	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1.32	\$ 4.02
Current Debt Service Payment ⁽³⁾	1.21	2.42	2.92	2.93	2.92	2.92	2.92	2.92	2.92	2.92	2.91
Interest on Debt Service in Arrears ⁽²⁾	-	0.08	0.26	0.22	-	-	-	-	-	0.09	0.28
Total Debt Service Outstanding (B)	1.21	2.50	6.89	6.31	2.92	2.92	2.92	2.92	2.92	4.33	7.21
Cash Available for Debt Payment	-	-	3.72	12.42	6.07	5.62	5.16	3.55	1.60	0.31	0.89
Debt Service Payment (A)	-	-	3.72	6.31	2.92	2.92	2.92	2.92	1.60	0.31	0.89
Total Debt Service Outstanding - Ending Balance [(B)-(A)]	\$ 1.21	\$ 3.71	\$ 3.16	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1.32	\$ 4.02	\$ 6.32

Notes:

(1) Minimum Cash at 5% of total expenditures (can dip slightly below due to cash flow fluctuations)

(2) Interest Rate at Blended Rate 6.875%

(3) Includes March 2012 Payment which was not made by City of Stockton

City of Stockton
 Exhibit 3 - Minimum Cash 5% of Total Expenditures
 Year Ended June 30 each respective period
 (\$'s in millions)

GENERAL FUND

	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
Adjusted Cash Forecast									
Ending Available Balance (per City)	16.64	15.43	14.79	15.72	16.91	18.72	21.14	24.56	28.92
<u>Adjustments:</u>									
Subtract: Cumulative Debt Service Payments (prior years)	(24.50)	(24.50)	(24.95)	(25.99)	(28.65)	(31.49)	(34.97)	(39.05)	(44.13)
Add: Cumulative Contingency (\$2.0 million every year)	20.00	22.00	24.00	26.00	28.00	30.00	32.00	34.00	36.00
Adjusted Ending Available Cash Balance (pre-Debt Service)	\$ 12.14	\$ 12.93	\$ 13.84	\$ 15.73	\$ 16.26	\$ 17.23	\$ 18.17	\$ 19.52	\$ 20.79
Debt Service Payment (A)	-	0.44	1.05	2.65	2.85	3.48	4.08	5.09	6.02
Ending Available Cash Balance after Debt Service Payment ⁽¹⁾	\$ 12.14	\$ 12.48	\$ 12.80	\$ 13.07	\$ 13.42	\$ 13.76	\$ 14.10	\$ 14.43	\$ 14.78
Regular Debt Service Payment ⁽²⁾	\$ 2.91	\$ 2.91	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.89	\$ 2.89
Debt Service Calculation									
Total Amount Owed - Beginning Balance	\$ 6.32	\$ 9.67	\$ 12.80	\$ 15.55	\$ 16.87	\$ 18.09	\$ 18.75	\$ 18.86	\$ 17.97
Current Debt Service Payment ⁽³⁾	2.91	2.91	2.90	2.90	2.90	2.90	2.90	2.89	2.89
Interest on Debt Service in Arrears ⁽²⁾	0.44	0.67	0.88	1.07	1.16	1.25	1.29	1.30	1.24
Total Debt Service Outstanding (B)	9.67	13.25	16.59	19.52	20.93	22.23	22.94	23.05	22.09
Cash Available for Debt Payment	-	0.44	1.05	2.65	2.85	3.48	4.08	5.09	6.02
Debt Service Payment (A)	-	0.44	1.05	2.65	2.85	3.48	4.08	5.09	6.02
Total Debt Service Outstanding - Ending Balance [(B)-(A)]	\$ 9.67	\$ 12.80	\$ 15.55	\$ 16.87	\$ 18.09	\$ 18.75	\$ 18.86	\$ 17.97	\$ 16.08

Notes:

(1) Minimum Cash at 5% of total expenditures (can dip slightly below due to cash flow fluctuations)

(2) Interest Rate at Blended Rate 6.875%

(3) Includes March 2012 Payment which was not made by City of Stockton

City of Stockton
 Exhibit 3 - Minimum Cash 5% of Total Expenditures
 Year Ended June 30 each respective period
 (\$'s in millions)

GENERAL FUND

	31-32	32-33	33-34	34-35	35-36	36-37	37-38	38-39	39-40	40-41
Adjusted Cash Forecast										
Ending Available Balance (per City)	37.67	46.59	47.24	49.77	49.56	53.30	53.30	55.28	56.31	58.38
<u>Adjustments:</u>										
Subtract: Cumulative Debt Service Payments (prior years)	(50.15)	(60.71)	(71.28)	(73.10)	(77.31)	(78.54)	(84.06)	(85.43)	(89.06)	(91.59)
Add: Cumulative Contingency (\$2.0 million every year)	38.00	40.00	42.00	44.00	46.00	48.00	50.00	52.00	54.00	56.00
Adjusted Ending Available Cash Balance (pre-Debt Service)	\$ 25.53	\$ 25.88	\$ 17.96	\$ 20.67	\$ 18.25	\$ 22.77	\$ 19.25	\$ 21.86	\$ 21.26	\$ 22.80
Debt Service Payment (A)	10.57	10.57	1.82	4.21	1.23	5.52	1.37	3.63	2.53	0.91
Ending Available Cash Balance after Debt Service Payment ⁽¹⁾	\$ 14.96	\$ 15.31	\$ 16.14	\$ 16.46	\$ 17.03	\$ 17.25	\$ 17.88	\$ 18.23	\$ 18.73	\$ 21.89
Regular Debt Service Payment ⁽²⁾										
	\$ 2.89	\$ 2.88	\$ 2.87	\$ 2.87	\$ 2.86	\$ 2.86	\$ 2.85	\$ 2.85	\$ -	\$ -
Debt Service Calculation										
Total Amount Owed - Beginning Balance	\$ 16.08	\$ 9.50	\$ 2.47	\$ 3.69	\$ 2.61	\$ 4.43	\$ 2.06	\$ 3.69	\$ 3.16	\$ 0.85
Current Debt Service Payment ⁽³⁾	2.89	2.88	2.87	2.87	2.86	2.86	2.85	2.85	-	-
Interest on Debt Service in Arrears ⁽²⁾	1.11	0.65	0.17	0.25	0.18	0.30	0.14	0.25	0.22	0.06
Total Debt Service Outstanding (B)	20.07	13.04	5.51	6.82	5.65	7.59	5.06	6.79	3.38	0.91
Cash Available for Debt Payment	10.57	10.57	1.82	4.21	1.23	5.52	1.37	3.63	2.53	3.65
Debt Service Payment (A)	10.57	10.57	1.82	4.21	1.23	5.52	1.37	3.63	2.53	0.91
Total Debt Service Outstanding - Ending Balance [(B)-(A)]	\$ 9.50	\$ 2.47	\$ 3.69	\$ 2.61	\$ 4.43	\$ 2.06	\$ 3.69	\$ 3.16	\$ 0.85	\$ -

Notes:

(1) Minimum Cash at 5% of total expenditures (can dip slightly below due to cash flow fluctuations)

(2) Interest Rate at Blended Rate 6.875%

(3) Includes March 2012 Payment which was not made by City of Stockton

EXHIBIT 4

City of Stockton
 Exhibit 4 - Minimum Cash 10% of Total Expenditures
 Year Ended June 30 each respective period
 (\$'s in millions)

GENERAL FUND

	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
Adjusted Cash Forecast											
Ending Available Balance (per City)	-	3.07	9.75	21.16	20.05	20.78	21.55	21.23	20.53	19.13	18.31
<u>Adjustments:</u>											
Subtract: Cumulative Debt Service Payments (prior years)	-	-	-	-	(7.11)	(7.11)	(8.35)	(10.51)	(11.45)	(12.08)	(12.10)
Add: Cumulative Contingency (\$2.0 million every year)	-	-	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
Adjusted Ending Available Cash Balance (pre-Debt Service)	-	\$ 3.07	\$ 11.76	\$ 25.16	\$ 18.94	\$ 21.67	\$ 23.20	\$ 22.71	\$ 23.08	\$ 23.05	\$ 24.21
Debt Service Payment (A)	-	-	-	7.11	-	1.24	2.16	0.94	0.63	0.02	0.59
Ending Available Cash Balance after Debt Service Payment ⁽¹⁾	-	\$ 3.07	\$ 11.76	\$ 18.05	\$ 18.94	\$ 20.43	\$ 21.04	\$ 21.77	\$ 22.45	\$ 23.03	\$ 23.62
Regular Debt Service Payment ⁽²⁾	1.21	\$ 2.42	\$ 2.92	\$ 2.93	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.91
Debt Service Calculation											
Total Amount Owed - Beginning Balance	-	\$ 1.21	\$ 3.71	\$ 6.89	\$ 3.18	\$ 6.32	\$ 8.43	\$ 9.77	\$ 12.42	\$ 15.56	\$ 19.53
Current Debt Service Payment ⁽³⁾	1.21	2.42	2.92	2.93	2.92	2.92	2.92	2.92	2.92	2.92	2.91
Interest on Debt Service in Arrears ⁽²⁾	-	0.08	0.26	0.47	0.22	0.44	0.58	0.67	0.86	1.07	1.35
Total Debt Service Outstanding (B)	1.21	2.50	6.89	10.29	6.32	9.67	11.93	13.36	16.19	19.55	23.79
Cash Available for Debt Payment	-	-	-	7.11	-	1.24	2.16	0.94	0.63	0.02	0.59
Debt Service Payment (A)	-	-	-	7.11	-	1.24	2.16	0.94	0.63	0.02	0.59
Total Debt Service Outstanding - Ending Balance [(B)-(A)]	\$ 1.21	\$ 3.71	\$ 6.89	\$ 3.18	\$ 6.32	\$ 8.43	\$ 9.77	\$ 12.42	\$ 15.56	\$ 19.53	\$ 23.20

Notes:

(1) Minimum Cash at 10% of total expenditures (can dip slightly below due to cash flow fluctuations)

(2) Interest Rate at Blended Rate 6.875%

(3) Includes March 2012 Payment which was not made by City of Stockton

City of Stockton
 Exhibit 4 - Minimum Cash 10% of Total Expenditures
 Year Ended June 30 each respective period
 (\$'s in millions)

GENERAL FUND

	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
Adjusted Cash Forecast									
Ending Available Balance (per City)	16.64	15.43	14.79	15.72	16.91	18.72	21.14	24.56	28.92
<u>Adjustments:</u>									
Subtract: Cumulative Debt Service Payments (prior years)	(12.69)	(12.69)	(12.69)	(13.19)	(15.57)	(18.07)	(21.21)	(24.95)	(29.70)
Add: Cumulative Contingency (\$2.0 million every year)	20.00	22.00	24.00	26.00	28.00	30.00	32.00	34.00	36.00
Adjusted Ending Available Cash Balance (pre-Debt Service)	\$ 23.95	\$ 24.74	\$ 26.10	\$ 28.53	\$ 29.34	\$ 30.65	\$ 31.93	\$ 33.62	\$ 35.23
Debt Service Payment (A)	-	-	0.50	2.38	2.50	3.14	3.73	4.75	5.67
Ending Available Cash Balance after Debt Service Payment ⁽¹⁾	\$ 23.95	\$ 24.74	\$ 25.60	\$ 26.15	\$ 26.84	\$ 27.51	\$ 28.20	\$ 28.87	\$ 29.55
Regular Debt Service Payment ⁽²⁾									
	\$ 2.91	\$ 2.91	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.89	\$ 2.89
Debt Service Calculation									
Total Amount Owed - Beginning Balance	\$ 23.20	\$ 27.71	\$ 32.53	\$ 37.18	\$ 40.26	\$ 43.44	\$ 46.18	\$ 48.53	\$ 50.01
Current Debt Service Payment ⁽³⁾	2.91	2.91	2.90	2.90	2.90	2.90	2.90	2.89	2.89
Interest on Debt Service in Arrears ⁽²⁾	1.60	1.91	2.24	2.56	2.77	2.99	3.18	3.34	3.44
Total Debt Service Outstanding (B)	27.71	32.53	37.67	42.64	45.94	49.32	52.26	54.76	56.34
Cash Available for Debt Payment	-	-	0.50	2.38	2.50	3.14	3.73	4.75	5.67
Debt Service Payment (A)	-	-	0.50	2.38	2.50	3.14	3.73	4.75	5.67
Total Debt Service Outstanding - Ending Balance [(B)-(A)]	\$ 27.71	\$ 32.53	\$ 37.18	\$ 40.26	\$ 43.44	\$ 46.18	\$ 48.53	\$ 50.01	\$ 50.67

Notes:

(1) Minimum Cash at 10% of total expenditures (can dip slightly below due to cash flow fluctuations)

(2) Interest Rate at Blended Rate 6.875%

(3) Includes March 2012 Payment which was not made by City of Stockton

City of Stockton
 Exhibit 4 - Minimum Cash 10% of Total Expenditures
 Year Ended June 30 each respective period
 (\$'s in millions)

GENERAL FUND

	31-32	32-33	33-34	34-35	35-36	36-37	37-38	38-39	39-40	40-41
Adjusted Cash Forecast										
Ending Available Balance (per City)	37.67	46.59	47.24	49.77	49.56	53.30	53.30	55.28	56.31	58.38
<u>Adjustments:</u>										
Subtract: Cumulative Debt Service Payments (prior years)	(35.37)	(45.75)	(55.97)	(56.96)	(60.85)	(61.51)	(66.81)	(67.55)	(70.83)	(72.86)
Add: Cumulative Contingency (\$2.0 million every year)	38.00	40.00	42.00	44.00	46.00	48.00	50.00	52.00	54.00	56.00
Adjusted Ending Available Cash Balance (pre-Debt Service)	\$ 40.30	\$ 40.84	\$ 33.28	\$ 36.82	\$ 34.72	\$ 39.80	\$ 36.49	\$ 39.73	\$ 39.49	\$ 41.53
Debt Service Payment (A)	10.38	10.22	0.99	3.89	0.66	5.30	0.74	3.28	2.03	3.24
Ending Available Cash Balance after Debt Service Payment ⁽¹⁾	\$ 29.92	\$ 30.63	\$ 32.29	\$ 32.93	\$ 34.06	\$ 34.49	\$ 35.75	\$ 36.46	\$ 37.46	\$ 38.29
Regular Debt Service Payment ⁽²⁾	\$ 2.89	\$ 2.88	\$ 2.87	\$ 2.87	\$ 2.86	\$ 2.86	\$ 2.85	\$ 2.85	\$ -	\$ -
Debt Service Calculation										
Total Amount Owed - Beginning Balance	\$ 50.67	\$ 46.66	\$ 42.54	\$ 47.35	\$ 49.59	\$ 55.21	\$ 56.57	\$ 62.58	\$ 66.46	\$ 69.00
Current Debt Service Payment ⁽³⁾	2.89	2.88	2.87	2.87	2.86	2.86	2.85	2.85	-	-
Interest on Debt Service in Arrears ⁽²⁾	3.49	3.21	2.93	3.26	3.42	3.80	3.90	4.31	4.58	4.75
Total Debt Service Outstanding (B)	57.04	52.75	48.34	53.48	55.87	61.87	63.31	69.73	71.03	73.75
Cash Available for Debt Payment	10.38	10.22	0.99	3.89	0.66	5.30	0.74	3.28	2.03	3.24
Debt Service Payment (A)	10.38	10.22	0.99	3.89	0.66	5.30	0.74	3.28	2.03	3.24
Total Debt Service Outstanding - Ending Balance [(B)-(A)]	\$ 46.66	\$ 42.54	\$ 47.35	\$ 49.59	\$ 55.21	\$ 56.57	\$ 62.58	\$ 66.46	\$ 69.00	\$ 70.51

Notes:

(1) Minimum Cash at 10% of total expenditures (can dip slightly below due to cash flow fluctuations)

(2) Interest Rate at Blended Rate 6.875%

(3) Includes March 2012 Payment which was not made by City of Stockton

EXHIBIT 5

City of Stockton
 Exhibit 5 - Minimum Cash 15% of Total Expenditures
 Year Ended June 30 each respective period
 (\$'s in millions)

GENERAL FUND

	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
Adjusted Cash Forecast											
Ending Available Balance (per City)	-	3.07	9.75	21.16	20.05	20.78	21.55	21.23	20.53	19.13	18.31
<u>Adjustments:</u>											
Subtract: Cumulative Debt Service Payments (prior years)	-	-	-	-	-	-	-	-	(0.56)	(0.86)	(0.86)
Add: Cumulative Contingency (\$2.0 million every year after)	-	-	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
Adjusted Ending Available Cash Balance (pre-Debt Service)	-	\$ 3.07	\$ 11.76	\$ 25.16	\$ 26.05	\$ 28.78	\$ 31.55	\$ 33.23	\$ 33.97	\$ 34.27	\$ 35.45
Debt Service Payment (A)	-	-	-	-	-	-	-	0.56	0.30	-	0.03
Ending Available Cash Balance after Debt Service Payment ⁽¹⁾	-	\$ 3.07	\$ 11.76	\$ 25.16	\$ 26.05	\$ 28.78	\$ 31.55	\$ 32.66	\$ 33.67	\$ 34.27	\$ 35.42
Regular Debt Service Payment ⁽²⁾	1.21	\$ 2.42	\$ 2.92	\$ 2.93	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.91
Debt Service Calculation											
Total Amount Owed - Beginning Balance	-	\$ 1.21	\$ 3.71	\$ 6.89	\$ 10.29	\$ 13.92	\$ 17.79	\$ 21.94	\$ 25.81	\$ 30.20	\$ 35.20
Current Debt Service Payment ⁽³⁾	1.21	2.42	2.92	2.93	2.92	2.92	2.92	2.92	2.92	2.92	2.91
Interest on Debt Service in Arrears ⁽²⁾	-	0.08	0.26	0.47	0.71	0.96	1.23	1.51	1.78	2.08	2.42
Total Debt Service Outstanding (B)	1.21	2.50	6.89	10.29	13.92	17.79	21.94	26.37	30.50	35.20	40.54
Cash Available for Debt Payment	-	-	-	-	-	-	-	0.56	0.30	-	0.03
Debt Service Payment (A)	-	-	-	-	-	-	-	0.56	0.30	-	0.03
Total Debt Service Outstanding - Ending Balance [(B)-(A)]	\$ 1.21	\$ 3.71	\$ 6.89	\$ 10.29	\$ 13.92	\$ 17.79	\$ 21.94	\$ 25.81	\$ 30.20	\$ 35.20	\$ 40.51

Notes:

(1) Minimum Cash at 15% of total expenditures (can dip slightly below due to cash flow fluctuations)

(2) Interest Rate at Blended Rate 6.875%

(3) Includes March 2012 Payment which was not made by City of Stockton

City of Stockton
 Exhibit 5 - Minimum Cash 15% of Total Expenditures
 Year Ended June 30 each respective period
 (\$'s in millions)

GENERAL FUND

	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
Adjusted Cash Forecast									
Ending Available Balance (per City)	16.64	15.43	14.79	15.72	16.91	18.72	21.14	24.56	28.92
<u>Adjustments:</u>									
Subtract: Cumulative Debt Service Payments (prior years)	(0.89)	(0.89)	(0.89)	(0.89)	(2.50)	(4.65)	(7.46)	(10.85)	(15.27)
Add: Cumulative Contingency (\$2.0 million every year after)	20.00	22.00	24.00	26.00	28.00	30.00	32.00	34.00	36.00
Adjusted Ending Available Cash Balance (pre-Debt Service)	\$ 35.75	\$ 36.54	\$ 37.90	\$ 40.83	\$ 42.41	\$ 44.07	\$ 45.69	\$ 47.72	\$ 49.66
Debt Service Payment (A)	-	-	-	1.61	2.16	2.81	3.39	4.42	5.33
Ending Available Cash Balance after Debt Service Payment ⁽¹⁾	\$ 35.75	\$ 36.54	\$ 37.90	\$ 39.22	\$ 40.26	\$ 41.27	\$ 42.30	\$ 43.30	\$ 44.33
<hr/>									
Regular Debt Service Payment ⁽²⁾	\$ 2.91	\$ 2.91	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.89	\$ 2.89
<hr/>									
Debt Service Calculation									
Total Amount Owed - Beginning Balance	\$ 40.51	\$ 46.21	\$ 52.31	\$ 58.81	\$ 64.16	\$ 69.32	\$ 74.19	\$ 78.81	\$ 82.71
Current Debt Service Payment ⁽³⁾	2.91	2.91	2.90	2.90	2.90	2.90	2.90	2.89	2.89
Interest on Debt Service in Arrears ⁽²⁾	2.79	3.18	3.60	4.05	4.42	4.77	5.11	5.43	5.70
Total Debt Service Outstanding (B)	46.21	52.31	58.81	65.77	71.48	77.00	82.20	87.13	91.29
Cash Available for Debt Payment	-	-	-	1.61	2.16	2.81	3.39	4.42	5.33
Debt Service Payment (A)	-	-	-	1.61	2.16	2.81	3.39	4.42	5.33
Total Debt Service Outstanding - Ending Balance [(B)-(A)]	\$ 46.21	\$ 52.31	\$ 58.81	\$ 64.16	\$ 69.32	\$ 74.19	\$ 78.81	\$ 82.71	\$ 85.96

Notes:

(1) Minimum Cash at 15% of total expenditures (can dip slightly below due to cash flow fluctuations)

(2) Interest Rate at Blended Rate 6.875%

(3) Includes March 2012 Payment which was not made by City of Stockton

City of Stockton
 Exhibit 5 - Minimum Cash 15% of Total Expenditures
 Year Ended June 30 each respective period
 (\$'s in millions)

GENERAL FUND

	31-32	32-33	33-34	34-35	35-36	36-37	37-38	38-39	39-40	40-41
Adjusted Cash Forecast										
Ending Available Balance (per City)	37.67	46.59	47.24	49.77	49.56	53.30	53.30	55.28	56.31	58.38
<u>Adjustments:</u>										
Subtract: Cumulative Debt Service Payments (prior years)	(20.59)	(30.79)	(40.66)	(40.82)	(44.39)	(44.48)	(49.57)	(49.68)	(52.60)	(54.13)
Add: Cumulative Contingency (\$2.0 million every year after)	38.00	40.00	42.00	44.00	46.00	48.00	50.00	52.00	54.00	56.00
Adjusted Ending Available Cash Balance (pre-Debt Service)	\$ 55.08	\$ 55.80	\$ 48.59	\$ 52.96	\$ 51.18	\$ 56.82	\$ 53.74	\$ 57.61	\$ 57.71	\$ 60.25
Debt Service Payment (A)	10.20	9.86	0.16	3.57	0.10	5.09	0.11	2.92	1.53	2.82
Ending Available Cash Balance after Debt Service Payment ⁽¹⁾	\$ 44.88	\$ 45.94	\$ 48.43	\$ 49.39	\$ 51.08	\$ 51.74	\$ 53.63	\$ 54.68	\$ 56.18	\$ 57.43
Regular Debt Service Payment ⁽²⁾										
	\$ 2.89	\$ 2.88	\$ 2.87	\$ 2.87	\$ 2.86	\$ 2.86	\$ 2.85	\$ 2.85	\$ -	\$ -
Debt Service Calculation										
Total Amount Owed - Beginning Balance	\$ 85.96	\$ 84.57	\$ 83.41	\$ 91.87	\$ 97.49	\$ 106.98	\$ 112.12	\$ 122.58	\$ 130.94	\$ 138.43
Current Debt Service Payment ⁽³⁾	2.89	2.88	2.87	2.87	2.86	2.86	2.85	2.85	-	-
Interest on Debt Service in Arrears ⁽²⁾	5.92	5.82	5.74	6.33	6.71	7.37	7.72	8.44	9.02	9.53
Total Debt Service Outstanding (B)	94.77	93.27	92.03	101.06	107.07	117.20	122.69	133.87	139.96	147.97
Cash Available for Debt Payment	10.20	9.86	0.16	3.57	0.10	5.09	0.11	2.92	1.53	2.82
Debt Service Payment (A)	10.20	9.86	0.16	3.57	0.10	5.09	0.11	2.92	1.53	2.82
Total Debt Service Outstanding - Ending Balance [(B)-(A)]	\$ 84.57	\$ 83.41	\$ 91.87	\$ 97.49	\$ 106.98	\$ 112.12	\$ 122.58	\$ 130.94	\$ 138.43	\$ 145.14

Notes:

(1) Minimum Cash at 15% of total expenditures (can dip slightly below due to cash flow fluctuations)

(2) Interest Rate at Blended Rate 6.875%

(3) Includes March 2012 Payment which was not made by City of Stockton

EXHIBIT 6

City of Stockton
 Exhibit 6 - Minimum Cash 16.67% of Total Expenditures
 Year Ended June 30 each respective period
 (\$'s in millions)

GENERAL FUND

	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
Adjusted Cash Forecast											
Ending Available Balance (per City)	-	3.07	9.75	21.16	20.05	20.78	21.55	21.23	20.53	19.13	18.31
<u>Adjustments:</u>											
Subtract: Cumulative Debt Service Payments (prior years)	-	-	-	-	-	-	-	-	-	-	-
Add: Cumulative Contingency (\$2.0 million every year after)	-	-	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
Adjusted Ending Available Cash Balance (pre-Debt Service)	-	\$ 3.07	\$ 11.76	\$ 25.16	\$ 26.05	\$ 28.78	\$ 31.55	\$ 33.23	\$ 34.53	\$ 35.13	\$ 36.31
Debt Service Payment (A)	-	-	-	-	-	-	-	-	-	-	-
Ending Available Cash Balance after Debt Service Payment ⁽¹⁾	-	\$ 3.07	\$ 11.76	\$ 25.16	\$ 26.05	\$ 28.78	\$ 31.55	\$ 33.23	\$ 34.53	\$ 35.13	\$ 36.31
Regular Debt Service Payment ⁽²⁾	1.21	\$ 2.42	\$ 2.92	\$ 2.93	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.92	\$ 2.91
Debt Service Calculation											
Total Amount Owed - Beginning Balance	-	\$ 1.21	\$ 3.71	\$ 6.89	\$ 10.29	\$ 13.92	\$ 17.79	\$ 21.94	\$ 26.37	\$ 31.10	\$ 36.16
Current Debt Service Payment ⁽³⁾	1.21	2.42	2.92	2.93	2.92	2.92	2.92	2.92	2.92	2.92	2.91
Interest on Debt Service in Arrears ⁽²⁾	-	0.08	0.26	0.47	0.71	0.96	1.23	1.51	1.82	2.14	2.49
Total Debt Service Outstanding (B)	1.21	2.50	6.89	10.29	13.92	17.79	21.94	26.37	31.10	36.16	41.57
Cash Available for Debt Payment	-	-	-	-	-	-	-	-	-	-	-
Debt Service Payment (A)	-	-	-	-	-	-	-	-	-	-	-
Total Debt Service Outstanding - Ending Balance [(B)-(A)]	\$ 1.21	\$ 3.71	\$ 6.89	\$ 10.29	\$ 13.92	\$ 17.79	\$ 21.94	\$ 26.37	\$ 31.10	\$ 36.16	\$ 41.57

Notes:

(1) Minimum Cash at 16.67% of total expenditures (can dip slightly below due to cash flow fluctuations)

(2) Interest Rate at Blended Rate 6.875%

(3) Includes March 2012 Payment which was not made by City of Stockton

City of Stockton
 Exhibit 6 - Minimum Cash 16.67% of Total Expenditures
 Year Ended June 30 each respective period
 (\$'s in millions)

GENERAL FUND

	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
Adjusted Cash Forecast									
Ending Available Balance (per City)	16.64	15.43	14.79	15.72	16.91	18.72	21.14	24.56	28.92
<u>Adjustments:</u>									
Subtract: Cumulative Debt Service Payments (prior years)	-	-	-	-	-	(0.17)	(2.86)	(6.14)	(10.45)
Add: Cumulative Contingency (\$2.0 million every year after)	20.00	22.00	24.00	26.00	28.00	30.00	32.00	34.00	36.00
Adjusted Ending Available Cash Balance (pre-Debt Service)	\$ 36.64	\$ 37.43	\$ 38.79	\$ 41.72	\$ 44.91	\$ 48.55	\$ 50.28	\$ 52.42	\$ 54.48
Debt Service Payment (A)	-	-	-	-	0.17	2.69	3.27	4.31	5.21
Ending Available Cash Balance after Debt Service Payment ⁽¹⁾	\$ 36.64	\$ 37.43	\$ 38.79	\$ 41.72	\$ 44.74	\$ 45.86	\$ 47.00	\$ 48.12	\$ 49.27
<hr/>									
Regular Debt Service Payment ⁽²⁾	\$ 2.91	\$ 2.91	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.90	\$ 2.89	\$ 2.89
<hr/>									
Debt Service Calculation									
Total Amount Owed - Beginning Balance	\$ 41.57	\$ 47.34	\$ 53.51	\$ 60.10	\$ 67.14	\$ 74.50	\$ 79.83	\$ 84.95	\$ 89.39
Current Debt Service Payment ⁽³⁾	2.91	2.91	2.90	2.90	2.90	2.90	2.90	2.89	2.89
Interest on Debt Service in Arrears ⁽²⁾	2.86	3.26	3.69	4.14	4.62	5.13	5.50	5.85	6.16
Total Debt Service Outstanding (B)	47.34	53.51	60.10	67.14	74.67	82.53	88.23	93.70	98.43
Cash Available for Debt Payment	-	-	-	-	0.17	2.69	3.27	4.31	5.21
Debt Service Payment (A)	-	-	-	-	0.17	2.69	3.27	4.31	5.21
Total Debt Service Outstanding - Ending Balance [(B)-(A)]	\$ 47.34	\$ 53.51	\$ 60.10	\$ 67.14	\$ 74.50	\$ 79.83	\$ 84.95	\$ 89.39	\$ 93.22

Notes:

(1) Minimum Cash at 16.67% of total expenditures (can dip slightly below due to cash flow fluctuations)

(2) Interest Rate at Blended Rate 6.875%

(3) Includes March 2012 Payment which was not made by City of Stockton

City of Stockton
 Exhibit 6 - Minimum Cash 16.67% of Total Expenditures
 Year Ended June 30 each respective period
 (\$'s in millions)

GENERAL FUND

	31-32	32-33	33-34	34-35	35-36	36-37	37-38	38-39	39-40	40-41
Adjusted Cash Forecast										
Ending Available Balance (per City)	37.67	46.59	47.24	49.77	49.56	53.30	53.30	55.28	56.31	58.38
<u>Adjustments:</u>										
Subtract: Cumulative Debt Service Payments (prior years)	(15.66)	(25.80)	(35.54)	(35.54)	(38.89)	(38.89)	(43.81)	(43.81)	(46.51)	(47.87)
Add: Cumulative Contingency (\$2.0 million every year after)	38.00	40.00	42.00	44.00	46.00	48.00	50.00	52.00	54.00	56.00
Adjusted Ending Available Cash Balance (pre-Debt Service)	\$ 60.02	\$ 60.80	\$ 53.70	\$ 58.23	\$ 56.68	\$ 62.42	\$ 59.50	\$ 63.48	\$ 63.80	\$ 66.51
Debt Service Payment (A)	10.14	9.74	-	3.35	-	4.92	-	2.70	1.36	2.68
Ending Available Cash Balance after Debt Service Payment ⁽¹⁾	\$ 49.88	\$ 51.05	\$ 53.70	\$ 54.89	\$ 56.68	\$ 57.50	\$ 59.50	\$ 60.77	\$ 62.44	\$ 63.82
Regular Debt Service Payment ⁽²⁾										
	\$ 2.89	\$ 2.88	\$ 2.87	\$ 2.87	\$ 2.86	\$ 2.86	\$ 2.85	\$ 2.85	\$ -	\$ -
Debt Service Calculation										
Total Amount Owed - Beginning Balance	\$ 93.22	\$ 92.39	\$ 91.89	\$ 101.09	\$ 107.57	\$ 117.85	\$ 123.90	\$ 135.28	\$ 144.74	\$ 153.35
Current Debt Service Payment ⁽³⁾	2.89	2.88	2.87	2.87	2.86	2.86	2.85	2.85	-	-
Interest on Debt Service in Arrears ⁽²⁾	6.42	6.36	6.33	6.96	7.41	8.12	8.53	9.32	9.97	10.56
Total Debt Service Outstanding (B)	102.53	101.63	101.09	110.92	117.85	128.82	135.28	147.45	154.71	163.91
Cash Available for Debt Payment	10.14	9.74	-	3.35	-	4.92	-	2.70	1.36	2.68
Debt Service Payment (A)	10.14	9.74	-	3.35	-	4.92	-	2.70	1.36	2.68
Total Debt Service Outstanding - Ending Balance [(B)-(A)]	\$ 92.39	\$ 91.89	\$ 101.09	\$ 107.57	\$ 117.85	\$ 123.90	\$ 135.28	\$ 144.74	\$ 153.35	\$ 161.22

Notes:

(1) Minimum Cash at 16.67% of total expenditures (can dip slightly below due to cash flow fluctuations)

(2) Interest Rate at Blended Rate 6.875%

(3) Includes March 2012 Payment which was not made by City of Stockton

EXHIBIT 7

City of Stockton Building Permit History ⁽¹⁾
"Permit Statistics by Application Type"
Statistical Compilation

	Average	Median	Adjusted Average ⁽²⁾	Adjusted Median ⁽²⁾
Single Family Residential	1,268	1,139	1,145	1,139
Multi-Family Residential	16	9	12	9
Commercial	34	33	34	29
Industrial	11	8	9	6
Institutional	3	3	3	3
	1,332	1,192	1,203	1,186

Notes

(1) Report date of 5/14/2012

(2) Removal of five high and low years of SFR

Source: City of Stockton Building Department

City of Stockton Building Permit History ⁽¹⁾
"Permit Statistics by Application Type"

Fiscal Year	2011/2012 ⁽²⁾	2010/2011	2009/2010	2008/2009	2007/2008	2006/2007
Single Family Residential	90	97	152	171	274	680
Multi-Family Residential	1	1	10	-	9	9
Commercial	5	5	9	20	33	49
Industrial	19	5	1	6	34	28
Institutional	1	2	7	1	1	1
Totals	116	110	179	198	351	767

Notes

(1) Report date of 5/14/2012

(2) YTD through 5/14/2012

Source: City of Stockton Building Department

City of Stockton Building Permit History ⁽¹⁾
"Permit Statistics by Application Type"

Fiscal Year	2005/2006	2004/2005	2003/2004	2002/2003	2001/2002	2000/2001	1999/2000
Single Family Residential	1,601	2,951	2,926	2,984	1,605	1,912	2,472
Multi-Family Residential	20	26	33	45	7	8	63
Commercial	40	50	78	34	44	46	61
Industrial	13	8	22	8	9	3	25
Institutional	3	3	6	7	4	2	6
Totals	1,677	3,038	3,065	3,078	1,669	1,971	2,627

Notes

(1) Report date of 5/14/2012

(2) YTD through 5/14/2012

Source: City of Stockton Building Department

City of Stockton Building Permit History ⁽¹⁾
"Permit Statistics by Application Type"

Fiscal Year	1998/1999	1997/1998	1996/1997	1995/1996	1994/1995	1993/1994	1992/1993
Single Family Residential	1,234	991	823	1,139	1,038	1,025	1,157
Multi-Family Residential	1	9	2	33	-	19	15
Commercial	28	33	22	29	20	29	23
Industrial	14	12	6	5	2	4	3
Institutional	2	2	5	6	1	-	5
Totals	1,279	1,047	858	1,212	1,061	1,077	1,203

Notes

(1) Report date of 5/14/2012

(2) YTD through 5/14/2012

Source: City of Stockton Building Department

City of Stockton Building Permit History ⁽¹⁾
"Permit Statistics by Application Type"

Fiscal Year	1991/1992
Single Family Residential	1,299
Multi-Family Residential	16
Commercial	55
Industrial	5
Institutional	5
Totals	1,380

Notes

(1) Report date of 5/14/2012

(2) YTD through 5/14/2012

Source: City of Stockton Building Department

EXHIBIT 8

Exhibit 8 - Summary of Proposed Treatment of Capital Markets Creditors in Stockton's Proposed Plan of Adjustment

Class	Name	Impaired / Unimpaired	Claim \$	Recovery (\$)	Recovery (%)	Notes (1)
1A, 1B	Certificates of Participation (Redevelopment Housing Projects) ("2003 Police/Fire/Library Certificates") (AMBAC)	Impaired	\$ 12,600,000	\$ 13,411,894	106.4%	(2)
2	Stockton Public Financing Authority Lease Revenue Refunding Bonds, Series A ("2006 SEB Bonds") (NPFPG)	Unimpaired	12,100,000	12,100,000	100.0%	
3	Redevelopment Agency of the City of Stockton Revenue Bonds, Series 2004 ("2004 Arena Bonds") (NPFPG)	Impaired	45,100,000	43,602,877	96.7%	(3)
4	Stockton Public financing Authority Lease Revenue Bonds, Series 2004 ("2004 Parking Structure Bonds") (NPFPG)	Impaired	25,632,235	26,521,102	103.5%	(4)
5	Stockton Public Financing Authority Lease Revenue Bonds 2007 Series A and B ("2007 Office Building Bonds") (Assured)	Impaired	40,400,000	21,793,689	53.9%	(5)
6	City of Stockton 2007 Pension Obligation Bonds Series A and B ("Pension Obligation Bonds") (Assured)	Impaired	124,280,000	64,528,495	51.9%	(6)

Pro-Forma Treatment of Retirees (Pension and Retiree Health)

12,15	City Retirees (combining retiree health claims and retiree component of pension claims)	Impaired	\$ 551,029,258	\$ 294,265,898	53.4%	(7)
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Proposed Treatment of Franklin:

12	Stockton Public Financing Authority Lease Revenue Bonds, 2009 Series A ("2009 LRBs") (Franklin)	Impaired	\$ 37,093,198	\$ 93,578	0.25%	(8)
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Notes:

- (1) For Capital Markets Creditors, recoveries based on NPV of general fund obligations valued as of June 1, 2014 using a 5% discount rate, except in the case of AMBAC, which uses an August 15, 2013 valuation date (the date of the first payment under that settlement agreement).
- (2) Claim based on figure per City (Presentation by Stockton City Council, October 3, 2013). Recovery excludes any application of the "Housing Set-Aside Amounts."
- (3) Claim based on figure per City (Presentation by Stockton City Council, October 3, 2013). Recovery based on General Fund schedule and excludes amounts in reserve fund.
- (4) Claim based on principal outstanding of \$25.6 million per revised payment schedule.
- (5) Claim based on figure per City (Presentation by Stockton City Council, October 3, 2013). Recovery per mid-point of Lee & Associates appraisal of 400 E. Main building dated July 20, 2012 for Assured.
- (6) Excludes contingent payments contemplated by the settlement documents.
- (7) Calculated utilizing retiree portion of retiree health UAAL per Segal Report for period ending June 30, 2011; for Pension, uses the CalPERS reports for period ending June 30, 2012, with the UAAL for Safety and Miscellaneous factored to reflect the percentage of the total liability that is owed to retirees (71.3% and 68.4% for Safety and Miscellaneous, respectively).
- (8) Recovery based on 0.9% payment applied to the Franklin claim as if the 502(b)(6) limitation that the City asserts were to apply.

EXHIBIT 9

Retiree Health Benefit Cost Analysis Explanation

This explanation was prepared by the City for distribution to retiree health benefit claimants by the Official Committee of Retirees.

The Segal Company ("Segal"), the City's health insurance and Other Post Employment Benefits (OPEB) actuary, calculated the amount of each retiree's health benefit claim by considering both aggregate and individual factors.

As a starting base from which the future projected claims calculations were made, Segal obtained from the City's third-party administrator retiree and their dependent medical and prescription claims data for fiscal years 2009-2010, 2010-2011, and 2011-2012. This data was divided by retirees under and over age 65. The large claims paid by the stop loss insurance carrier were deducted from these claims, and the annual stop loss insurance premiums for these three claim years were included. This claim information was further adjusted by the Plan changes made to the retiree plans in 2010, 2011 and 2012 that would impact what the retiree benefits would have been going forward from 2012. These include deductible changes, co-pay changes, formulary changes, etc. This claim information was also adjusted to add an estimate of Incurred But Not Reported Claims (IBNR) that was not included in the data reported by the third-party administrator. Segal calculated the IBNR reserves estimate based on lag data (the length of time from when a medical service is performed and when it is submitted for payment to the third-party administrator or from Medco/Caremark, the City's pharmacy vendor) and standard Segal methodologies.

From this claim information, Segal developed a per capita cost for the 12-month period from July 1, 2012 through June 30, 2013. Segal then projected from this data annual retiree health costs for each retiree's lifetime. This projection assumes the costs of medical and prescription services increase over time, i.e., medical inflation. This calculation assumes annual increases based on standard Segal trends for medical inflation for both medical claims (starting at 8.5% for 2012-2013, decreasing to 5% by 2020-2021, and then 5% ongoing) and pharmacy claims (starting at 7% for 2012-2013, decreasing to 5% in 2017-2018, and then 5% ongoing). Trend factors are based on Segal published trends, which are developed annually based on a survey of vendors and take into consideration factors that could impact healthcare costs.

The claims calculation took into account the life expectancy of each of the retirees and their one City-covered dependent based on the 2009 period life expectancy tables for healthy and disabled lives as published by the Social Security Administration. The Social Security tables used have calculated life expectancies separately for females and males. Thus, the sex of each retiree impacts the life expectancy assumed and the amount of that person's claim. Each year's projected payout to retirees is the sum of the medical, prescription drug, and administrative costs and subtracts out any applicable retiree self-pay amounts, so that the claims amounts represent the City's net cost of providing health benefits to retirees. The retiree self-pay rates were assumed to increase at the same trend as the medical costs assumed in the calculation. All projected payments assume complete years without any proration.

The valuation program takes each retiree and dependent listed and calculates the probability of death or survival at each age based on the 2009 Social Security

life expectancy tables. For each year of survival, the net claims cost based on the retiree or dependent's age and sex was trended and adjusted for the probability of survival. This amount was added to the retiree's liability. This iteration is performed until the probability of the retiree's survival is zero. At that point, if the dependent was still surviving (based on calculations), there is no further claim liability for the dependent, since the City's liability ends with the retiree. If the dependent is a child, they were included in the calculation as a dependent only until age 23.

The total of each retiree's claim (which includes amounts for dependent benefits where applicable) over their life expectancy is the total City liability for retiree health benefit claims.

The liability for each eligible retiree also takes into consideration that:

- Ages are rounded up or down based on the nearest year.
- Any retiree who was enrolled on June 30, 2012 but who died after that date (or who dies prior to resolution of his or her retiree health benefit claim) was not treated any differently in the calculation because the benefit loss calculation is based on enrollment as of June 30, 2012 and in order to treat all the retirees in a similar manner. (The retiree's estate would receive their settlement amount).
- Claims calculation includes the covered dependent that the retiree had enrolled as of June 30, 2012. If the retiree did not cover a spouse or domestic partner but did cover a child, the child was included in the claims calculation only to age 23, when their

eligibility to participate in the Plan would have ended. If more than one child was enrolled as of June 30, 2012, the calculation used the youngest child to reflect the maximum length of time the retiree would have been entitled to a City-paid benefit for their child.

(Retirees are eligible for City payment for one dependent under their Memorandum of Understanding. Based on the Medical Plan, children are eligible to be enrolled in a City retiree plan only to age 23.)

- Claims calculation takes into account the transition of retirees who are now under age 65 from not being eligible for Medicare coverage to when the person turns age 65 and is eligible for Medicare coverage. Since Medicare is the primary insurance and the City Plan is secondary, the claims amounts paid by the City Plan decline, which would lower the amount of the claims to which that retiree is entitled. This adjustment is based on the year the retiree turns age 65 and is eligible for Medicare, and also the year their spouse/domestic partner turns age 65 and is eligible for Medicare. Retirees not eligible for Medicare were not adjusted by the Medicare integration factor.
- Claims are based on the life expectancy of the retiree, and there is no surviving spouse benefit that extends past the life expectancy of the retiree in these calculations. Based on City Council action, only surviving spouses of retirees who had died prior to July 1, 2012 and where the surviving spouse was already enrolled in the Plan as of June 30, 2012 are included in the retiree group.

- The City's paid retiree medical benefit has two parts: An under age 65 benefit that is time-limited to 15 years, and a separate over age 65 benefit that has no time limit. Retirees under 65 years of age as of July 1, 2012, who would have exhausted their maximum 15-year benefit, had their claims calculation adjusted to reflect retirees paying the retiree premium rate during the years in which they would not have been eligible for paid coverage. However, their calculation does include benefits they would have received once they turned age 65 under the Memorandum of Understanding. Retirees whose maximum 15 years benefit would not have been exhausted by the time they turned age 65 did not have their claims calculation impacted.

A list of retirees and their one dependent eligible for benefits was provided to Segal by the City. To be eligible, a retiree must have been eligible for retiree health benefits based under the Memorandum of Understanding in effect at the time of his or her retirement and must have been enrolled in the City retiree medical plans as of **June 30, 2012**. Also included are retirees who were otherwise eligible for retiree benefits but had waived their coverage, or persons who had exhausted their under age 65 year 15-year benefit but were otherwise eligible for the over age 65 benefit, and persons who had retired prior to July 1, 2012 but had not yet been enrolled as a retiree in the medical plan. Based on City Council action, only surviving spouses of retirees who had died prior to July 1, 2012 and where the surviving spouse was already enrolled in the Plan as of June 30, 2012 are included in the eligible group.

EXHIBIT 10



California Public Employees' Retirement System
 Actuarial Office
 P.O. Box 942701
 Sacramento, CA 94229-2701
 TTY: (916) 795-3240
 (888) 225-7377 phone • (916) 795-2744 fax
www.calpers.ca.gov

October 2013

**SAFETY PLAN OF THE CITY OF STOCKTON (CalPERS ID: 6373973665)
 Annual Valuation Report as of June 30, 2012**

Dear Employer,

As an attachment to this letter, you will find a copy of the June 30, 2012 actuarial valuation report of your pension plan. Your 2012 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your CalPERS staff actuary, whose signature appears in the Actuarial Certification Section on page 1, is available to discuss the report with you after October 31, 2013.

Future Contribution Rates

The exhibit below displays the Minimum Employer Contribution Rate for fiscal year 2014-15 and a projected contribution rate for 2015-16, before any cost sharing. The projected rate for 2015-16 is based on the most recent information available, including an estimate of the investment return for fiscal year 2012-13, namely 12 percent, and the impact of the new smoothing methods adopted by the CalPERS Board in April 2013 that will impact employer rates for the first time in fiscal year 2015-16. For a projection of employer rates beyond 2015-16, please refer to the "Analysis of Future Investment Return Scenarios" in the "Risk Analysis" section, which includes rate projections through 2019-20 under a variety of investment return scenarios. Please disregard any projections that we may have provided you in the past.

Fiscal Year	Employer Contribution Rate
2014-15	41.385%
2015-16	44.5% (projected)

Member contributions other than cost sharing, (whether paid by the employer or the employee) are in addition to the above rates. **The employer contribution rates in this report do not reflect any cost sharing arrangement you may have with your employees.**

The estimate for 2015-16 also assumes that there are no future contract amendments and no liability gains or losses (such as larger than expected pay increases, more retirements than expected, etc.). This is a very important assumption because these gains and losses do occur and can have a significant impact on your contribution rate. Even for the largest plans, such gains and losses often cause a change in the employer's contribution rate of one or two percent of payroll and may be even larger in some less common instances. These gains and losses cannot be predicted in advance so the projected employer contribution rates are just estimates. Your actual rate for 2015-16 will be provided in next year's report.

SAFETY PLAN OF THE CITY OF STOCKTON
(CalPERS ID: 6373973665)
Annual Valuation Report as of June 30, 2012
Page 2

Changes since the Prior Year's Valuation

On January 1, 2013, the Public Employees' Pension Reform Act of 2013 (PEPRA) took effect. The impact of most of the PEPRA changes will first show up in the rates and the benefit provision listings of the June 30, 2013 valuation for the 2015-16 rates. For more information on PEPRA, please refer to the CalPERS website.

On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and rate smoothing policies. Beginning with the June 30, 2013 valuations that set the 2015-16 rates, CalPERS will no longer use an actuarial value of assets and will employ an amortization and smoothing policy that will pay for all gains and losses over a fixed 30-year period with the increases or decreases in the rate spread directly over a 5-year period. The impact of this new actuarial methodology is reflected in the "Analysis of Future Investment Return Scenarios" subsection of the "Risk Analysis" section of your report.

A review of the preferred asset allocation mix for CalPERS investment portfolio will be performed in late 2013, which could influence future discount rates. In addition, CalPERS will review economic and demographic assumptions, including mortality rate improvements that are likely to increase employer contribution rates in future years. The "Analysis of Future Investment Return Scenarios" subsection does **not** reflect the impact of assumption changes that we expect will also impact future rates.

Besides the above noted changes, there may also be changes specific to your plan such as contract amendments and funding changes.

Further descriptions of general changes are included in the "Highlights and Executive Summary" section and in Appendix A, "Actuarial Methods and Assumptions." The effect of the changes on your rate is included in the "Reconciliation of Required Employer Contributions."

We understand that you might have a number of questions about these results. While we are very interested in discussing these results with your agency, in the interest of allowing us to give every public agency their results, we ask that you wait until after October 31 to contact us with actuarial questions. If you have other questions, you may call the Customer Contact Center at (888)-CalPERS or **(888-225-7377)**.

Sincerely,



ALAN MILLIGAN
Chief Actuary



ACTUARIAL VALUATION

as of June 30, 2012

for the SAFETY PLAN of the CITY OF STOCKTON

(CalPERS ID: 6373973665)

**REQUIRED CONTRIBUTIONS
FOR FISCAL YEAR
July 1, 2014 – June 30, 2015**

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CALPERS ACTUARIAL VALUATION - June 30, 2012
SAFETY PLAN OF THE CITY OF STOCKTON
CalPERS ID: 6373973665

ACTUARIAL CERTIFICATION

To the best of our knowledge, this report is complete and accurate and contains sufficient information to disclose, fully and fairly, the funded condition of the SAFETY PLAN OF THE CITY OF STOCKTON. This valuation is based on the member and financial data as of June 30, 2012 provided by the various CalPERS databases and the benefits under this plan with CalPERS as of the date this report was produced. It is our opinion that the valuation has been performed in accordance with generally accepted actuarial principles, in accordance with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for this plan, as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

The undersigned is an actuary for CalPERS, who is a member of the American Academy of Actuaries and the Society of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



KELLY STURM, ASA, MAAA
Senior Pension Actuary, CalPERS

HIGHLIGHTS AND EXECUTIVE SUMMARY

- **INTRODUCTION**
- **PURPOSE OF THE REPORT**
- **REQUIRED EMPLOYER CONTRIBUTION**
- **PLAN'S FUNDED STATUS**
- **COST**
- **CHANGES SINCE THE PRIOR YEAR'S VALUATION**
- **SUBSEQUENT EVENTS**

Introduction

This report presents the results of the June 30, 2012 actuarial valuation of the SAFETY PLAN OF THE CITY OF STOCKTON of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the fiscal year 2014-15 required employer contribution rates.

On January 1, 2013, the Public Employees' Pension Reform Act of 2013 (PEPRA) took effect. The impact of most of the PEPRA changes will first show up in the rates and the benefit provision listings of the June 30, 2013 valuation, which sets the 2015-16 contribution rates. For more information on PEPRA, please refer to the CalPERS website.

On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and smoothing policies. Prior to this change, CalPERS employed an amortization and smoothing policy, which spread investment returns over a 15-year period while experience gains and losses were amortized over a rolling 30-year period. Effective with the June 30, 2013 valuations, CalPERS will no longer use an actuarial value of assets and will employ an amortization and smoothing policy that will spread rate increases or decreases over a 5-year period, and will amortize all experience gains and losses over a fixed 30-year period.

The new amortization and smoothing policy will be used for the first time in the June 30, 2013 actuarial valuations. These valuations will be performed in the fall of 2014 and will set employer contribution rates for the fiscal year 2015-16.

As stewards of the System, CalPERS must ensure that the pension fund is sustainable over multiple generations. Our strategic plan calls for us to take an integrated view of our assets and liabilities and to take steps designed to achieve a fully funded plan. A review of the preferred asset allocation mix for CalPERS investment portfolio will be performed in late 2013, which could influence future discount rates. In addition, CalPERS will review economic and demographic assumptions, including mortality rate improvements that are likely to increase employer contribution rates in future years.

Purpose of the Report

The actuarial valuation was prepared by the CalPERS Actuarial Office using data as of June 30, 2012. The purpose of the report is to:

- Set forth the actuarial assets and accrued liabilities of this plan as of June 30, 2012;
- Determine the required employer contribution rate for the fiscal year July 1, 2014 through June 30, 2015;
- Provide actuarial information as of June 30, 2012 to the CalPERS Board of Administration and other interested parties, and to;
- Provide pension information as of June 30, 2012 to be used in financial reports subject to Governmental Accounting Standards Board (GASB) Statement Number 27 for a Single Employer Defined Benefit Pension Plan.

California Actuarial Advisory Panel Recommendations

This report includes all the basic disclosure elements as described in the *Model Disclosure Elements for Actuarial Valuation Reports* recommended in 2011 by the California Actuarial Advisory Panel (CAAP), with the exception of including the original base amounts of the various components of the unfunded liability in the Schedule of Amortization Bases shown on page 19.

Additionally, this report includes the following "Enhanced Risk Disclosures" also recommended by the CAAP in the Model Disclosure Elements document:

- A "Deterministic Stress Test," projecting future results under different investment income scenarios
- A "Sensitivity Analysis," showing the impact on current valuation results using a 1% plus or minus change in the discount rate.

CALPERS ACTUARIAL VALUATION - June 30, 2012
 SAFETY PLAN OF THE CITY OF STOCKTON
 CalPERS ID: 6373973665

The use of this report for any other purposes may be inappropriate. In particular, this report does not contain information applicable to alternative benefit costs. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

Required Employer Contribution

	Fiscal Year 2013-14	Fiscal Year 2014-15
Actuarially Determined Employer Contributions		
1. Contribution in Projected Dollars		
a) Total Normal Cost	\$ 16,760,403	\$ 14,336,846
b) Employee Contribution ¹	5,011,749	4,401,856
c) Employer Normal Cost [(1a) – (1b)]	11,748,654	9,934,990
d) Unfunded Contribution	7,521,294	10,306,453
e) Required Employer Contribution [(1c) + (1d)]	\$ 19,269,948	\$ 20,241,443
Projected Annual Payroll for Contribution Year	\$ 55,686,101	\$ 48,909,515
2. Contribution as a Percentage of Payroll		
a) Total Normal Cost	30.098%	29.313%
b) Employee Contribution ¹	9.000%	9.000%
c) Employer Normal Cost [(2a) – (2b)]	21.098%	20.313%
d) Unfunded Rate	13.507%	21.072%
e) Required Employer Rate [(2c) + (2d)]	34.605%	41.385%
Minimum Employer Contribution Rate²	34.605%	41.385%
Annual Lump Sum Prepayment Option ³	\$ 18,585,588	\$ 19,522,581

¹This is the percentage specified in the Public Employees Retirement Law, net of any reduction from the use of a modified formula or other factors. Employee cost sharing is not shown in this report.

²The Minimum Employer Contribution Rate under PEPRA is the greater of the required employer rate or the employer normal cost.

³Payment must be received by CalPERS before the first payroll reported to CalPERS of the new fiscal year and after June 30. If there is contractual cost sharing or other change, this amount will change.

Plan's Funded Status

	June 30, 2011	June 30, 2012
1. Present Value of Projected Benefits	\$ 946,603,971	\$ 950,265,629
2. Entry Age Normal Accrued Liability	802,778,310	830,040,184
3. Actuarial Value of Assets (AVA)	685,732,778	685,764,728
4. Unfunded Liability (AVA Basis) [(2) – (3)]	\$ 117,045,532	\$ 144,275,456
5. Funded Ratio (AVA Basis) [(3) / (2)]	85.4%	82.6%
6. Market Value of Assets (MVA)	\$ 598,289,135	\$ 571,679,198
7. Unfunded Liability (MVA Basis) [(2) – (6)]	\$ 204,489,175	\$ 258,360,986
8. Funded Ratio (MVA Basis) [(6) / (2)]	74.5%	68.9%
Superfunded Status	No	No

Cost

Actuarial Cost Estimates in General

What will this pension plan cost? Unfortunately, there is no simple answer. There are two major reasons for the complexity of the answer. First, actuarial calculations, including the ones in this report, are based on a number of assumptions about the future. These assumptions can be divided into two categories.

- Demographic assumptions include the percentage of employees that will terminate, die, become disabled, and retire in each future year.
- Economic assumptions include future salary increases for each active employee, and the assumption with the greatest impact, future asset returns at CalPERS for each year into the future until the last dollar is paid to current members of your plan.

While CalPERS has set these assumptions to reflect our best estimate of the real future of your plan, it must be understood that these assumptions are very long-term predictors and will surely not be realized in any one year. For example, while the asset earnings at CalPERS have averaged more than the assumed return of 7.5 percent for the past twenty year period ending June 30, 2013, returns for each fiscal year ranged from negative -24 percent to +21.7 percent.

Second, the very nature of actuarial funding produces the answer to the question of plan cost as the sum of two separate pieces.

- The Normal Cost (i.e., the future annual premiums in the absence of surplus or unfunded liability) expressed as a percentage of total active payroll.
- The Past Service Cost or Accrued Liability (i.e., the current value of the benefit for all credited past service of current members) which is expressed as a lump sum dollar amount.

The cost is the sum of a percent of future pay and a lump sum dollar amount (the sum of an apple and an orange if you will). To communicate the total cost, either the Normal Cost (i.e., future percent of payroll) must be converted to a lump sum dollar amount (in which case the total cost is the present value of benefits), or the Past Service Cost (i.e., the lump sum) must be converted to a percent of payroll (in which case the total cost is expressed as the employer's rate, part of which is permanent and part temporary). Converting the Past Service Cost lump sum to a percent of payroll requires a specific amortization period, and the employer rate will vary depending on the amortization period chosen.

Changes since the Prior Year's Valuation

Benefits

The standard actuarial practice at CalPERS is to recognize mandated legislative benefit changes in the first annual valuation following the effective date of the legislation. Voluntary benefit changes by plan amendment are generally included in the first valuation that is prepared after the amendment becomes effective even if the valuation date is prior to the effective date of the amendment.

This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to Appendix B for a summary of the plan provisions used in this valuation. The effect of any mandated benefit changes or plan amendments on the unfunded liability is shown in the "(Gain)/Loss Analysis" and the effect on your employer contribution rate is shown in the "Reconciliation of Required Employer Contributions." It should be noted that no change in liability or rate is shown for any plan changes, which were already included in the prior year's valuation.

Public Employees' Pension Reform Act of 2013 (PEPRA)

On January 1, 2013, the Public Employees' Pension Reform Act of 2013 (PEPRA) took effect, requiring that a public employer's contribution to a defined benefit plan, in combination with employee contributions to that defined benefit plan, shall not be less than the normal cost rate. Beginning July 1, 2013, this means that some plans with surplus will be paying more than they otherwise would. For more information on PEPRA, please refer to the CalPERS website.

Subsequent Events

Actuarial Methods and Assumptions

On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and smoothing policies. Beginning with the June 30, 2013 valuations that set the 2015-16 rates, CalPERS will no longer use an actuarial value of assets and will employ an amortization and rate smoothing policy that will pay for all gains and losses over a fixed 30-year period with the increases or decreases in the rate spread directly over a 5-year period. The impact of this new actuarial methodology is reflected in the "Expected Rate Increases" subsection of the "Risk analysis" section of your report.

Not reflected in the "Expected Rate Increases" subsection of the "Risk analysis" section is the impact of assumption changes that we expect will also, impact future rates. A review of the preferred asset allocation mix for CalPERS investment portfolio will be performed in late 2013, which could influence future discount rates. In addition, CalPERS will review economic and demographic assumptions, including mortality rate improvements that are likely to increase employer contribution rates in future years.

Bankruptcy

On June 28, 2012, the City of Stockton filed a petition for Chapter 9 bankruptcy protection with the United States Bankruptcy Court. That petition was approved by the Judge on April 1, 2013. The bankruptcy did not have an impact on the valuation or the determination of the required contributions for the 2014-15 fiscal year.

ASSETS

- **RECONCILIATION OF THE MARKET VALUE OF ASSETS**
- **DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS**
- **ASSET ALLOCATION**
- **CALPERS HISTORY OF INVESTMENT RETURNS**

CALPERS ACTUARIAL VALUATION - June 30, 2012
 SAFETY PLAN OF THE CITY OF STOCKTON
 CalPERS ID: 6373973665

Reconciliation of the Market Value of Assets

1.	Market Value of Assets as of 6/30/11 Including Receivables	\$	598,289,135
2.	Receivables for Service Buybacks as of 6/30/11		598,451
3.	Market Value of Assets as of 6/30/11		597,690,684
4.	Employer Contributions		13,384,977
5.	Employee Contributions		4,392,327
6.	Benefit Payments to Retirees and Beneficiaries		(42,339,890)
7.	Refunds		(69,339)
8.	Lump Sum Payments		0
9.	Transfers and Miscellaneous Adjustments		(1,283,259)
10.	Investment Return		(1,347,850)
11.	Market Value of Assets as of 6/30/12	\$	570,427,650
12.	Receivables for Service Buybacks as of 6/30/12		1,251,548
13.	Market Value of Assets as of 6/30/12 Including Receivables	\$	571,679,198

Development of the Actuarial Value of Assets

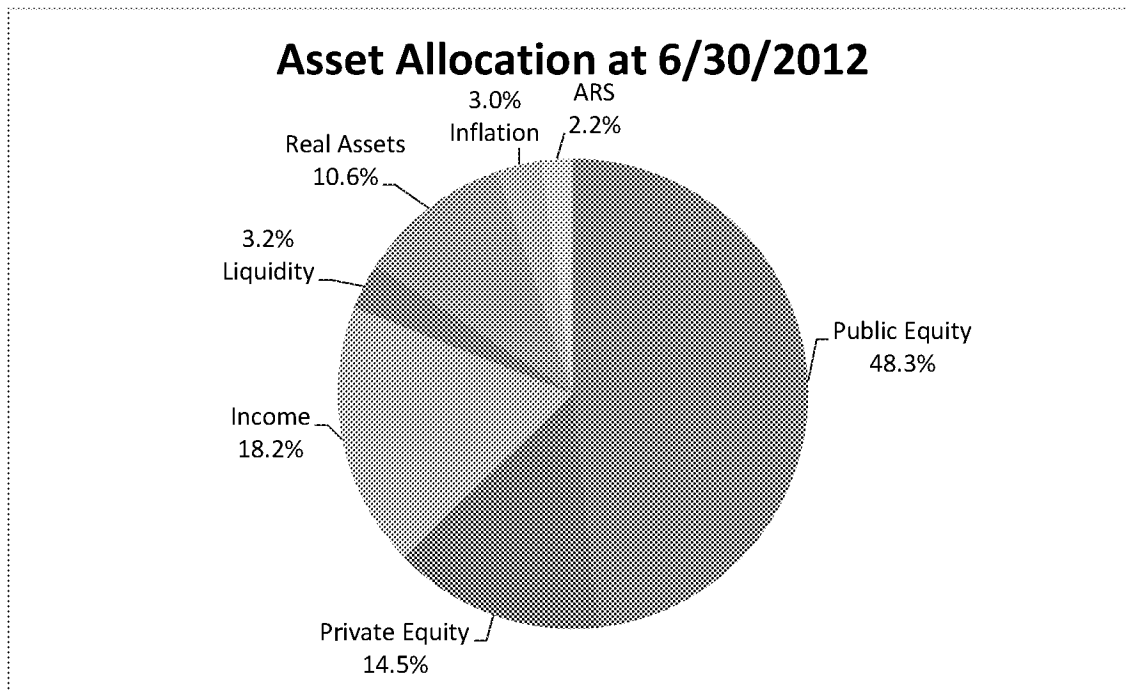
1.	Actuarial Value of Assets as of 6/30/11 Used For Rate Setting Purposes	\$	685,732,778
2.	Receivables for Service Buybacks as of 6/30/11		598,451
3.	Actuarial Value of Assets as of 6/30/11		685,134,327
4.	Employer Contributions		13,384,977
5.	Employee Contributions		4,392,327
6.	Benefit Payments to Retirees and Beneficiaries		(42,339,890)
7.	Refunds		(69,339)
8.	Lump Sum Payments		0
9.	Transfers and Miscellaneous Adjustments		(1,283,259)
10.	Expected Investment Income at 7.5%		50,430,824
11.	Expected Actuarial Value of Assets	\$	709,649,967
12.	Market Value of Assets as of 6/30/12	\$	570,427,650
13.	Preliminary Actuarial Value of Assets $[(11) + ((12) - (11)) / 15]$		700,368,479
14.	Maximum Actuarial Value of Assets (120% of (12))		684,513,180
15.	Minimum Actuarial Value of Assets (80% of (12))		456,342,120
16.	Actuarial Value of Assets {Lesser of [(14), Greater of ((13), (15))]}		684,513,180
17.	Actuarial Value to Market Value Ratio		120.0%
18.	Receivables for Service Buybacks as of 6/30/12		1,251,548
19.	Actuarial Value of Assets as of 6/30/12 Used for Rate Setting Purposes	\$	685,764,728

Asset Allocation

CalPERS adheres to an Asset Allocation Strategy which establishes asset class allocation policy targets and ranges, and manages those asset class allocations within their policy ranges. CalPERS recognizes that over 90 percent of the variation in investment returns of a well-diversified pool of assets can typically be attributed to asset allocation decisions. In December 2010 the Board approved the policy asset class targets and ranges listed below. These policy asset allocation targets and ranges are expressed as a percentage of total assets and were expected to be implemented over a period of one to two years beginning July 1, 2011 and reviewed again in December 2013.

The asset allocation and market value of assets shown below reflect the values of the Public Employees Retirement Fund (PERF) in its entirety as of June 30, 2012. The assets for CITY OF STOCKTON SAFETY PLAN are part of the Public Employees Retirement Fund (PERF) and are invested accordingly.

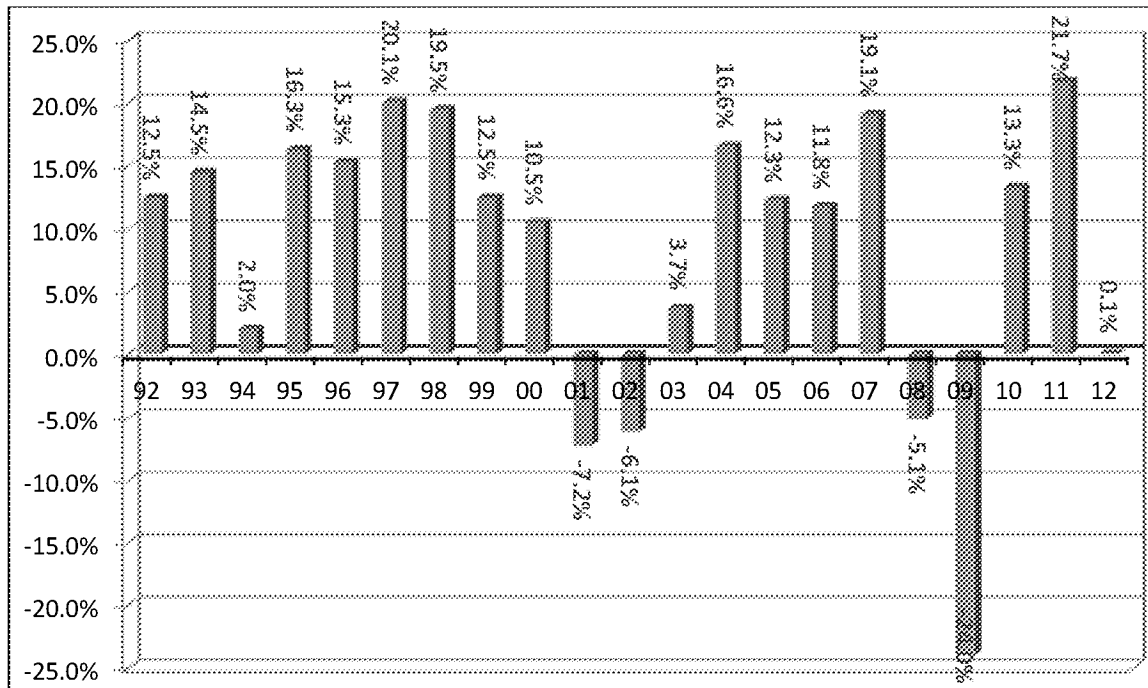
(A) Asset Class	(B) Market Value (\$ Billion)	(C) Policy Target Allocation	(D) Policy Target Range
1) Public Equity	113.0	50.0%	+/- 7%
2) Private Equity	33.9	14.0%	+/- 4%
3) Fixed Income	42.6	17.0%	+/- 5%
4) Cash Equivalents	7.5	4.0%	+/- 5%
5) Real Assets	24.8	11.0%	+/- 3%
6) Inflation Assets	7.0	4.0%	+/- 3%
7) Absolute Return Strategy (ARS)	5.1	0.0%	N/A
Total Fund	\$233.9	100.0%	N/A



CALPERS ACTUARIAL VALUATION - June 30, 2012
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CalPERS History of Investment Returns

The following is a chart with historical annual returns of the Public Employees Retirement Fund for each fiscal year ending on June 30. Beginning in 2002, the figures are reported as gross of fees.



LIABILITIES AND RATES

- **DEVELOPMENT OF ACCRUED AND UNFUNDED LIABILITIES**
- **(GAIN) / LOSS ANALYSIS 06/30/11 - 06/30/12**
- **SCHEDULE OF AMORTIZATION BASES**
- **RECONCILIATION OF REQUIRED EMPLOYER CONTRIBUTIONS**
- **EMPLOYER CONTRIBUTION RATE HISTORY**
- **FUNDING HISTORY**

CALPERS ACTUARIAL VALUATION - June 30, 2012
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Development of Accrued and Unfunded Liabilities

1.	Present Value of Projected Benefits		
	a) Active Members	\$	334,080,503
	b) Transferred Members		17,477,674
	c) Terminated Members		6,534,659
	d) Members and Beneficiaries Receiving Payments		592,172,793
	e) Total	\$	950,265,629
2.	Present Value of Future Employer Normal Costs	\$	82,997,783
3.	Present Value of Future Employee Contributions	\$	37,227,662
4.	Entry Age Normal Accrued Liability		
	a) Active Members [(1a) - (2) - (3)]	\$	213,855,058
	b) Transferred Members (1b)		17,477,674
	c) Terminated Members (1c)		6,534,659
	d) Members and Beneficiaries Receiving Payments (1d)		592,172,793
	e) Total	\$	830,040,184
5.	Actuarial Value of Assets (AVA)	\$	685,764,728
6.	Unfunded Accrued Liability (AVA Basis) [(4e) - (5)]	\$	144,275,456
7.	Funded Ratio (AVA Basis) [(5) / (4e)]		82.6%
8.	Market Value of Assets (MVA)	\$	571,679,198
9.	Unfunded Liability (MVA Basis) [(4e) - (8)]	\$	258,360,986
10.	Funded Ratio (MVA Basis) [(8) / (4e)]		68.9%

CALPERS ACTUARIAL VALUATION - June 30, 2012
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(Gain) /Loss Analysis 6/30/11 – 6/30/12

To calculate the cost requirements of the plan, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is compared to the expected experience based on the actuarial assumptions. This results in actuarial gains or losses, as shown below.

A Total (Gain)/Loss for the Year

1.	Unfunded Accrued Liability (UAL) as of 6/30/11	\$	117,045,532
2.	Expected Payment on the UAL during 2011/2012		4,199,684
3.	Interest through 6/30/12 $[(.075 \times (A1) - ((1.075)^{1/2} - 1) \times (A2)]$		8,623,774
4.	Expected UAL before all other changes $[(A1) - (A2) + (A3)]$		121,469,622
5.	Change due to plan changes		0
6.	Change due to assumption change		0
7.	Expected UAL after all other changes $[(A4) + (A5) + (A6)]$		121,469,622
8.	Actual UAL as of 6/30/12		144,275,456
9.	Total (Gain)/Loss for 2011/2012 $[(A8) - (A7)]$	\$	22,805,834

B Contribution (Gain)/Loss for the Year

1.	Expected Contribution (Employer and Employee)	\$	19,997,971
2.	Interest on Expected Contributions		736,367
3.	Actual Contributions		17,777,304
4.	Interest on Actual Contributions		654,597
5.	Expected Contributions with Interest $[(B1) + (B2)]$		20,734,338
6.	Actual Contributions with Interest $[(B3) + (B4)]$		18,431,901
7.	Contribution (Gain)/Loss $[(B5) - (B6)]$	\$	2,302,437

C Asset (Gain)/Loss for the Year

1.	Actuarial Value of Assets as of 6/30/11 Including Receivables	\$	685,732,778
2.	Receivables as of 6/30/11		598,451
3.	Actuarial Value of Assets as of 6/30/11		685,134,327
4.	Contributions Received		17,777,304
5.	Benefits and Refunds Paid		(42,409,229)
6.	Transfers and miscellaneous adjustments		(1,283,259)
7.	Expected Int. $[(.075 \times (C3) + ((1.075)^{1/2} - 1) \times ((C4) + (C5) + (C6))]$		50,430,824
8.	Expected Assets as of 6/30/12 $[(C3) + (C4) + (C5) + (C6) + (C7)]$		709,649,967
9.	Receivables as of 6/30/12		1,251,548
10.	Expected Assets Including Receivables		710,901,515
11.	Actual Actuarial Value of Assets as of 6/30/12		685,764,728
12.	Asset (Gain)/Loss $[(C10) - (C11)]$	\$	25,136,787

D Liability (Gain)/Loss for the Year

1.	Total (Gain)/Loss (A9)	\$	22,805,834
2.	Contribution (Gain)/Loss (B7)		2,302,437
3.	Asset (Gain)/Loss (C12)		25,136,787
4.	Liability (Gain)/Loss $[(D1) - (D2) - (D3)]$	\$	(4,633,390)

Development of the (Gain)/Loss Balance as of 6/30/12

1.	(Gain)/Loss Balance as of 6/30/11	\$	20,156,066
2.	Payment Made on the Balance during 2011/2012		1,210,391
3.	Interest through 6/30/12 $[(.075 \times (1) - ((1.075)^{1/2} - 1) \times (2)]$		1,467,136
4.	Scheduled (Gain)/Loss Balance as of 6/30/12 $[(1) - (2) + (3)]$	\$	20,412,811
5.	(Gain)/Loss for Fiscal Year ending 6/30/12 $[(A9) \text{ above}]$		22,805,834
6.	Final (Gain)/Loss Balance as of 6/30/12 $[(4) + (5)]$	\$	43,218,645

CALPERS ACTUARIAL VALUATION - June 30, 2012
SAFETY PLAN OF THE CITY OF STOCKTON
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Schedule of Amortization Bases

There is a two-year lag between the Valuation Date and the Contribution Fiscal Year.

- The assets, liabilities and funded status of the plan are measured as of the valuation date; June 30, 2012.
- The employer contribution rate determined by the valuation is for the fiscal year beginning two years after the valuation date; fiscal year 2014-15.

This two-year lag is necessary due to the amount of time needed to extract and test the membership and financial data, and due to the need to provide public agencies with their employer contribution rates well in advance of the start of the fiscal year.

The Unfunded Liability is used to determine the employer contribution and therefore must be rolled forward two years from the valuation date to the first day of the fiscal year for which the contribution is being determined. The Unfunded Liability is rolled forward each year by subtracting the expected Payment on the Unfunded Liability for the fiscal year and adjusting for interest. The Expected Payment on the Unfunded Liability for a fiscal year is equal to the Expected Employer Contribution for the fiscal year minus the Expected Normal Cost for the year. The Employer Contribution Rate for the first fiscal year is determined by the actuarial valuation two years ago and the rate for the second year is from the actuarial valuation one year ago. The Normal Cost Rate for each of the two fiscal years is assumed to be the same as the rate determined by the current valuation. All expected dollar amounts are determined by multiplying the rate by the expected payroll for the applicable fiscal year, based on payroll as of the valuation date.

Reason for Base	Date Established	Amortization Period	Balance 6/30/12	Expected Payment 2012-13	Balance 6/30/13	Expected Payment 2013-14	Balance 6/30/14	Amounts for Fiscal 2014-15	
								Scheduled Payment for 2014-15	Payment as Percent-age of Payroll
FRESH START	06/30/06	24	\$22,511,026	\$1,459,677	\$22,685,928	\$1,499,414	\$22,832,747	\$1,544,396	3.158%
ASSUMPTION CHANGE	06/30/09	17	\$16,572,337	\$1,296,704	\$16,470,811	\$1,331,579	\$16,325,511	\$1,371,526	2.804%
SPECIAL (GAIN)/LOSS	06/30/09	27	\$31,184,119	\$1,909,179	\$31,543,449	\$1,961,378	\$31,875,608	\$2,020,219	4.131%
SPECIAL (GAIN)/LOSS	06/30/10	28	\$12,604,205	\$758,655	\$12,762,930	\$779,484	\$12,911,964	\$802,869	1.642%
GOLDEN HANDSHAKE	06/30/11	19	\$3,310,801	\$0	\$3,559,111	\$268,732	\$3,547,417	\$276,794	0.566%
ASSUMPTION CHANGE	06/30/11	19	\$15,035,938	\$(310,328)	\$16,485,388	\$414,912	\$17,291,602	\$1,349,211	2.759%
SPECIAL (GAIN)/LOSS	06/30/11	29	\$(1,449,577)	\$0	\$(1,558,296)	\$(93,576)	\$(1,578,147)	\$(96,384)	(0.197%)
PAYMENT (GAIN)/LOSS	06/30/12	30	\$1,287,962	\$(1,051,519)	\$2,474,798	\$(616,603)	\$3,299,715	\$198,149	0.405%
(GAIN)/LOSS	06/30/12	30	\$43,218,645	\$1,228,748	\$45,186,051	\$1,241,231	\$47,288,069	\$2,839,673	5.806%
TOTAL			\$144,275,456	\$5,291,116	\$149,610,170	\$6,786,551	\$153,794,486	\$10,306,453	21.072%

The special (gain)/loss bases were established using the temporary modification recognized in the 2009, 2010 and 2011 annual valuations. Unlike the gain/loss occurring in previous and subsequent years, the gain/loss recognized in the 2009, 2010, and 2011 annual valuations will be amortized over fixed and declining 30-year periods so that these annual gain/losses will be fully paid off in 30 years. The gain/loss recognized in 2012 and later valuations will be combined with the gain/loss from 2008 and earlier valuations.

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Reconciliation of Required Employer Contributions

	Percentage of Projected Payroll	Estimated \$ Based on Projected Payroll
1. Contribution for 7/1/13 – 6/30/14	34.605%	\$ 19,269,948
2. Effect of changes since the prior year annual valuation		
a) Effect of unexpected changes in demographics and financial results	6.780%	3,316,533
b) Effect of plan changes	0.000%	0
c) Effect of changes in Assumptions	0.000%	0
d) Effect of change in payroll	-	(2,345,038)
e) Effect of elimination of amortization base	0.000%	0
f) Effect of changes due to Fresh Start	0.000%	0
g) Net effect of the changes above [Sum of (a) through (f)]	6.780%	971,495
3. Contribution for 7/1/14 – 6/30/15 [(1)+(2g)]	41.385%	20,241,443

The contribution actually paid (item 1) may be different if a prepayment of unfunded actuarial liability is made or a plan change became effective after the prior year's actuarial valuation was performed.

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Employer Contribution Rate History

The table below provides a recent history of the employer contribution rates for your plan, as determined by the annual actuarial valuation. It does not account for prepayments or benefit changes made in the middle of the year.

Required By Valuation

Fiscal Year	Employer Normal Cost	Unfunded Rate	Total Employer Contribution Rate
2010 - 2011	19.193%	4.078%	23.271%
2011 - 2012	20.255%	8.844%	29.099%
2012 - 2013	20.675%	11.115%	31.790%
2013 - 2014	21.098%	13.507%	34.605%
2014 - 2015	20.313%	21.072%	41.385%

Funding History

The Funding History below shows the recent history of the actuarial accrued liability, the market value of assets, the actuarial value of assets, funded ratios and the annual covered payroll. The Actuarial Value of Assets is used to establish funding requirements and the funded ratio on this basis represents the progress toward fully funding future benefits for current plan participants. The funded ratio based on the Market Value of Assets is an indicator of the short-term solvency of the plan.

Valuation Date	Accrued Liability	Actuarial Value of Assets (AVA)	Market Value of Assets (MVA)	Funded Ratio		Annual Covered Payroll
				AVA	MVA	
06/30/08	\$ 664,028,434	\$ 625,633,414	\$ 630,768,567	94.2%	95.0%	\$ 56,811,031
06/30/09	724,324,197	644,939,577	461,800,556	89.0%	63.8%	58,595,623
06/30/10	758,325,561	662,601,684	509,873,530	87.4%	67.2%	54,798,082
06/30/11	802,778,310	685,732,778	598,289,135	85.4%	74.5%	50,960,671
06/30/12	830,040,184	685,764,728	571,679,198	82.6%	68.9%	44,759,135

RISK ANALYSIS

- **VOLATILITY RATIOS**
- **PROJECTED RATES**
- **ANALYSIS OF FUTURE INVESTMENT RETURN SCENARIOS**
- **ANALYSIS OF DISCOUNT RATE SENSITIVITY**
- **HYPOTHETICAL TERMINATION LIABILITY**

Volatility Ratios

The actuarial calculations supplied in this communication are based on a number of assumptions about very long-term demographic and economic behavior. Unless these assumptions (terminations, deaths, disabilities, retirements, salary growth, and investment return) are exactly realized each year, there will be differences on a year-to-year basis. The year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise the employer's rates from one year to the next. Therefore, the rates will inevitably fluctuate, especially due to the ups and downs of investment returns.

Asset Volatility Ratio (AVR)

Plans that have higher asset to payroll ratios produce more volatile employer rates due to investment return. For example, a plan with an asset to payroll ratio of 8 may experience twice the contribution volatility due to investment return volatility, than a plan with an asset to payroll ratio of 4. Below we have shown your asset volatility ratio, a measure of the plan's current rate volatility. It should be noted that this ratio is a measure of the current situation. It increases over time but generally tends to stabilize as the plan matures.

Liability Volatility Ratio

Plans that have higher liability to payroll ratios produce more volatile employer rates due to investment return and changes in liability. For example, a plan with a liability to payroll ratio of 8 is expected to have twice the contribution volatility of a plan with a liability to payroll ratio of 4. The liability volatility ratio is also included in the table below. It should be noted that this ratio indicates a longer-term potential for contribution volatility and the asset volatility ratio, described above, will tend to move closer to this ratio as the plan matures.

Rate Volatility	As of June 30, 2012	
1. Market Value of Assets without Receivables	\$	570,427,650
2. Payroll		44,759,135
3. Asset Volatility Ratio (AVR = 1. / 2.)		12.7
4. Accrued Liability	\$	830,040,184
5. Liability Volatility Ratio (4. / 2.)		18.5

Projected Rates

On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and smoothing policies. Beginning with the June 30, 2013 valuations that will set the 2015-16 rates, CalPERS will employ an amortization and rate smoothing policy that will pay for all gains and losses over a fixed 30-year period with the increases or decreases in the rate spread directly over a 5-year period. The table below shows projected employer contribution rates (before cost sharing) for the next five Fiscal Years, ***assuming CalPERS earns 12% for fiscal year 2012-13 and 7.50 percent every fiscal year thereafter***, and assuming that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur between now and the beginning of the fiscal year 2015-16. ***Consequently, these projections do not take into account potential rate increases from likely future assumption changes.*** Nor do they take into account the positive impact PEPPRA is expected to gradually have on the normal cost.

	New Rate	Projected Future Employer Contribution Rates				
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Contribution Rates:	41.385%	44.5%	47.7%	50.8%	54.0%	57.1%

Analysis of Future Investment Return Scenarios

In July 2013, the investment return for fiscal year 2012-13 was announced to be 12.5 percent. Note that this return is before administrative expenses and also does not reflect final investment return information for real estate and private equities. The final return information for these two asset classes is expected to be available later in October. For purposes of projecting future employer rates, we are assuming a 12 percent investment return for fiscal year 2012-13.

The investment return realized during a fiscal year first affects the contribution rate for the fiscal year 2 years later. Specifically, the investment return for 2012-13 will first be reflected in the June 30, 2013 actuarial valuation that will be used to set the 2015-16 employer contribution rates, the 2013-14 investment return will first be reflected in the June 30, 2014 actuarial valuation that will be used to set the 2016-17 employer contribution rates and so forth.

Based on a 12 percent investment return for fiscal year 2012-13 **and the April 17, 2013 CalPERS Board-approved amortization and rate smoothing method change**, and assuming that all other actuarial assumptions will be realized, and that no further changes to assumptions, contributions, benefits, or funding will occur between now and the beginning of the fiscal year 2015-16, the effect on the 2015-16 Employer Rate is as follows: (Note that this estimated rate does not reflect additional assumption changes as discussed in the "Subsequent Events" section.)

Estimated 2015-16 Employer Rate

44.5%

Estimated Increase in Employer Rate between 2014-15 and 2015-16

3.1%

As part of this report, a sensitivity analysis was performed to determine the effects of various investment returns during fiscal years 2013-14, 2014-15 and 2015-16 on the 2016-17, 2017-18 and 2018-19 employer rates. Once again, the projected rate increases assume that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur.

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Five different investment return scenarios were selected.

- The first scenario is what one would expect if the markets were to give us a 5th percentile return from July 1, 2013 through June 30, 2016. The 5th percentile return corresponds to a -4.1 percent return for each of the 2013-14, 2014-15 and 2015-16 fiscal years.
- The second scenario is what one would expect if the markets were to give us a 25th percentile return from July 1, 2013 through June 30, 2016. The 25th percentile return corresponds to a 2.6 percent return for each of the 2013-14, 2014-15 and 2015-16 fiscal years.
- The third scenario assumed the return for 2013-14, 2014-15, 2015-16 would be our assumed 7.5 percent investment return which represents about a 49th percentile event.
- The fourth scenario is what one would expect if the markets were to give us a 75th percentile return from July 1, 2013 through June 30, 2016. The 75th percentile return corresponds to a 11.9 percent return for each of the 2013-14, 2014-15 and 2015-16 fiscal years.
- Finally, the last scenario is what one would expect if the markets were to give us a 95th percentile return from July 1, 2013 through June 30, 2016. The 95th percentile return corresponds to a 18.5 percent return for each of the 2013-14, 2014-15 and 2015-16 fiscal years.

The table below shows the estimated projected contribution rates and the estimated increases for your plan under the five different scenarios.

2013-16 Investment Return Scenario	Estimated Employer Rate			Estimated Change in Employer Rate between 2015-16 and 2018-19
	2016-17	2017-18	2018-19	
-4.1% (5th percentile)	49.9%	57.1%	66.2%	21.7%
2.6% (25th percentile)	48.6%	53.6%	59.4%	14.9%
7.5%	47.7%	50.8%	54.0%	9.5%
11.9%(75th percentile)	46.8%	48.3%	48.8%	4.3%
18.5%(95th percentile)	45.6%	44.4%	40.6%	-3.9%

Analysis of Discount Rate Sensitivity

The following analysis looks at the 2014-15 employer contribution rates under two different discount rate scenarios. Shown below are the employer contribution rates assuming discount rates that are 1 percent lower and 1 percent higher than the current valuation discount rate. This analysis gives an indication of the potential required employer contribution rates if the PERF were to realize investment returns of 6.50 percent or 8.50 percent over the long-term.

This type of analysis gives the reader a sense of the long-term risk to the employer contribution rates.

2014-15 Employer Contribution Rate			
As of June 30, 2012	6.50% Discount Rate (-1%)	7.50% Discount Rate (assumed rate)	8.50% Discount Rate (+1%)
Employer Normal Cost	28.173%	20.313%	14.374%
Unfunded Rate Payment	38.059%	21.072%	5.734%
Total	66.232%	41.385%	20.108%

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 SAFETY PLAN OF THE CITY OF STOCKTON
 CalPERS ID: 6373973665

Hypothetical Termination Liability

Below is an estimate of the financial position of your plan if you had terminated your contract with CalPERS as of June 30, 2012 using the discount rates shown below. Your plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. In December 2012, the CalPERS Board adopted a more conservative investment policy and asset allocation strategy for the Terminated Agency Pool. Since the Terminated Agency Pool has limited funding sources, expected benefit payments are secured by risk-free assets. With this change, CalPERS increased benefit security for members while limiting its funding risk. This asset allocation has a lower expected rate of return than the PERF. Consequently, the lower discount rate for the Terminated Agency pool results in higher liabilities for terminated plans.

In order to terminate your plan, you must first contact our Retirement Services Contract Unit to initiate a Resolution of Intent to Terminate. The completed Resolution will allow your plan actuary to give you a preliminary termination valuation with a more up-to-date estimate of your plan liabilities. CalPERS advises you to consult with your plan actuary before beginning this process.

Valuation Date	Hypothetical Termination Liability ¹	Market Value of Assets (MVA)	Unfunded Termination Liability	Termination Funded Ratio	Termination Liability Discount Rate ²
06/30/11	\$ 1,186,712,063	\$ 598,289,135	\$ 588,422,928	50.4%	4.82%
06/30/12	1,614,069,650	571,679,198	1,042,390,452	35.4%	2.98%

¹ The hypothetical liabilities calculated above include a 7 percent mortality contingency load in accordance with Board policy. Other actuarial assumptions, such as wage and inflation assumptions, can be found in appendix A.

² The discount rate assumption used for termination valuations is a weighted average of the 10 and 30-year US Treasury yields in effect on the valuation date that equal the duration of the pension liabilities. For purposes of this hypothetical termination liability estimate, the discount rate used, 2.98 percent, is the yield on the 30-year US Treasury Separate Trading of Registered Interest and Principal of Securities (STRIPS) as of June 30, 2012. In last year's report the May 2012 rate of 2.87 percent was inadvertently shown rather than the June rate of 2.98 percent. Please note, as of June 30, 2013 the 30-year STRIPS yield was 3.72 percent.

GASB STATEMENT NO. 27

SAFETY PLAN of the CITY OF STOCKTON**Information for Compliance with GASB Statement No. 27**

Disclosure under GASB 27 follows. However, note that effective for financial statements for fiscal years beginning after June 15, 2014, GASB 68 replaces GASB 27. GASB 68 will require additional reporting. CalPERS is planning to provide GASB 68 disclosure information upon request for an additional fee. We urge you to start discussions with your auditors on how to implement GASB 68.

Under GASB 27, an employer reports an annual pension cost (APC) equal to the annual required contribution (ARC) plus an adjustment for the cumulative difference between the APC and the employer's actual plan contributions for the year. The cumulative difference is called the net pension obligation (NPO). The ARC for the period July 1, 2014 to June 30, 2015 has been determined by an actuarial valuation of the plan as of June 30, 2012. The unadjusted GASB compliant contribution rate for the indicated period is 41.385 percent of payroll. In order to calculate the dollar value of the ARC for inclusion in financial statements prepared as of June 30, 2015, this contribution rate, less any employee cost sharing, as modified by any amendments for the year, would be multiplied by the payroll of covered employees that was actually paid during the period July 1, 2014 to June 30, 2015. The employer and the employer's auditor are responsible for determining the NPO and the APC.

A summary of principal assumptions and methods used to determine the ARC is shown below.

<u>Retirement Program</u>	
Valuation Date	June 30, 2012
Actuarial Cost Method	Entry Age Normal Cost Method
Amortization Method	Level Percent of Payroll
Average Remaining Period	26 Years as of the Valuation Date
Asset Valuation Method	15 Year Smoothed Market
Actuarial Assumptions	
Discount Rate	7.50% (net of administrative expenses)
Projected Salary Increases	3.30% to 14.20% depending on Age, Service, and type of employment
Inflation	2.75%
Payroll Growth	3.00%
Individual Salary Growth	A merit scale varying by duration of employment coupled with an assumed annual inflation growth of 2.75% and an annual production growth of 0.25%.

Initial unfunded liabilities are amortized over a closed period that depends on the plan's date of entry into CalPERS. Subsequent plan amendments are amortized as a level percentage of pay over a closed 20-year period. Gains and losses that occur in the operation of the plan are amortized over a 30-year rolling period, which results in an amortization of about 6 percent of unamortized gains and losses each year. If the plan's accrued liability exceeds the actuarial value of plan assets, then the amortization payment on the total unfunded liability may not be lower than the payment calculated over a 30-year amortization period. More detailed information on assumptions and methods is provided in Appendix A of this report. Appendix B contains a description of benefits included in the valuation.

The Schedule of Funding Progress below shows the recent history of the actuarial accrued liability, actuarial value of assets, their relationship and the relationship of the unfunded actuarial accrued liability to payroll.

Valuation Date	Accrued Liability (a)	Actuarial Value of Assets (AVA) (b)	Unfunded Liability (UL) (a)-(b)	Funded Ratios		Annual Covered Payroll (c)	UL As a % of Payroll [(a)-(b)]/(c)
				(AVA) (b)/(a)	Market Value		
06/30/08	\$ 664,028,434	\$ 625,633,414	\$ 38,395,020	94.2%	95.0%	\$ 56,811,031	67.6%
06/30/09	724,324,197	644,939,577	79,384,620	89.0%	63.8%	58,595,623	135.5%
06/30/10	758,325,561	662,601,684	95,723,877	87.4%	67.2%	54,798,082	174.7%
06/30/11	802,778,310	685,732,778	117,045,532	85.4%	74.5%	50,960,671	229.7%
06/30/12	830,040,184	685,764,728	144,275,456	82.6%	68.9%	44,759,135	322.3%

PLAN'S MAJOR BENEFIT PROVISIONS

Plan's Major Benefit Options

Shown below is a summary of the major optional benefits for which your agency has contracted. A description of principal standard and optional plan provisions is in the following section of this Appendix.

Benefit Provision	Contract Package			
	Receiving	Receiving	Active	Active
Benefit Formula			3.0% @ 50 No Full	2.0% @ 50 No Full
Social Security Coverage Full/Modified			12 mos.	12 mos.
Final Average Compensation Period			Yes	Yes
Sick Leave Credit			Standard	Standard
Non-Industrial Disability			Yes	Yes
Industrial Disability			No Level 4 Yes No	No Level 4 Yes No
Pre-Retirement Death Benefits Optional Settlement 2W			\$500 Yes	\$500 Yes
1959 Survivor Benefit Level Special Alternate (firefighters)			2%	2%
Post-Retirement Death Benefits Lump Sum				
Survivor Allowance (PRSA)				
COLA				

APPENDICES

- **APPENDIX A – ACTUARIAL METHODS AND ASSUMPTIONS**
- **APPENDIX B – PRINCIPAL PLAN PROVISIONS**
- **APPENDIX C – SUMMARY OF PARTICIPANT DATA**
- **APPENDIX D – GLOSSARY OF ACTUARIAL TERMS**

APPENDIX A

ACTUARIAL METHODS AND ASSUMPTIONS

- **ACTUARIAL DATA**
- **ACTUARIAL METHODS**
- **ACTUARIAL ASSUMPTIONS**
- **MISCELLANEOUS**

Actuarial Data

As stated in the Actuarial Certification, the data, which serves as the basis of this valuation, has been obtained from the various CalPERS databases. We have reviewed the valuation data and believe that it is reasonable and appropriate in aggregate. We are unaware of any potential data issues that would have a material effect on the results of this valuation, except that data does not always contain the latest salary information for former members now in reciprocal systems and does not recognize the potential for unusually large salary deviation in certain cases such as elected officials. Therefore, salary information in these cases may not be accurate. These situations are relatively infrequent, however, and when they do occur, they generally do not have a material impact on the employer contribution rates.

Actuarial Methods

Funding Method

The actuarial funding method used for the Retirement Program is the Entry Age Normal Cost Method. Under this method, projected benefits are determined for all members and the associated liabilities are spread in a manner that produces level annual cost as a percent of pay in each year from the age of hire (entry age) to the assumed retirement age. The cost allocated to the current fiscal year is called the normal cost.

The actuarial accrued liability for active members is then calculated as the portion of the total cost of the plan allocated to prior years. The actuarial accrued liability for members currently receiving benefits, for active members beyond the assumed retirement age, and for members entitled to deferred benefits, is equal to the present value of the benefits expected to be paid. No normal costs are applicable for these participants.

The excess of the total actuarial accrued liability over the actuarial value of plan assets is called the unfunded actuarial accrued liability. Funding requirements are determined by adding the normal cost and an amortization of the unfunded liability as a level percentage of assumed future payrolls. All changes in liability due to plan amendments, changes in actuarial assumptions, or changes in actuarial methodology are amortized separately over a 20-year period. All new gains or losses are tracked and amortized over a rolling 30-year period. If a plan's accrued liability exceeds the actuarial value of assets, the annual contribution with respect to the total unfunded liability may not be less than the amount produced by a 30-year amortization of the unfunded liability.

Additional contributions will be required for any plan or pool if their cash flows hamper adequate funding progress by preventing the expected funded status on a market value of assets basis to either:

- Increase by at least 15% by June 30, 2043; or
- Reach a level of 75% funded by June 30, 2043

The necessary additional contribution will be obtained by changing the amortization period of the gains and losses, except for those occurring in the fiscal years 2008-2009, 2009-2010, and 2010-2011 to a period, which will result in the satisfaction of the above criteria. CalPERS actuaries will reassess the criteria above when performing each future valuation to determine whether or not additional contributions are necessary.

An exception to the funding rules above is used whenever the application of such rules results in inconsistencies. In these cases, a "fresh start" approach is used. This simply means that the current unfunded actuarial liability is projected and amortized over a set number of years. As mentioned above, if the annual contribution on the total unfunded liability was less than the amount produced by a 30-year amortization of the unfunded liability, the plan actuary would implement a 30-year fresh start. However, in the case of a 30-year fresh start, just the unfunded liability not already in the (gain)/loss base (which is already amortized over 30 years), will go into the new fresh start base. In addition, a fresh start is needed in the following situations:

- 1) When a positive payment would be required on a negative unfunded actuarial liability (or conversely a negative payment on a positive unfunded actuarial liability); or

-
- 2) When there are excess assets, rather than an unfunded liability. In this situation, a 30-year fresh start is used, unless a longer fresh start is needed to avoid a negative total rate.

It should be noted that the actuary may choose to use a fresh start under other circumstances. In all cases, the fresh start period is set by the actuary at what is deemed appropriate; however, the period will not be less than five years, nor greater than 30 years.

Asset Valuation Method

In order to dampen the effect of short-term market value fluctuations on employer contribution rates, the following asset smoothing technique is used. First, an Expected Value of Assets is computed by bringing forward the prior year's Actuarial Value of Assets and the contributions received and benefits paid during the year at the assumed actuarial rate of return. The Actuarial Value of Assets is then computed as the Expected Value of Assets plus one-fifteenth of the difference between the actual Market Value of Assets and the Expected Value of Assets, as of the valuation date. However, in no case will the Actuarial Value of Assets be less than 80% or greater than 120% of the actual Market Value of Assets.

In June 2009, the CalPERS Board adopted changes to the asset smoothing method in order to phase in over a three-year period the impact of the negative -24 percent investment loss experienced by CalPERS in fiscal year 2008-2009. The following changes were adopted:

- Increase the corridor limits for the actuarial value of assets from 80 percent/120 percent of market value to 60 percent/140 percent of market value on June 30, 2009
- Reduce the corridor limits for the actuarial value of assets to 70 percent/130 percent of market value on June 30, 2010
- Return to the 80 percent/120 percent of market value corridor limits for the actuarial value of assets on June 30, 2011 and thereafter

On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and rate smoothing policies. Beginning with the June 30, 2013 valuations that set the 2015-16 rates, CalPERS will employ an amortization and smoothing policy that will pay for all gains and losses over a fixed 30-year period with the increases or decreases in the rate spread directly over a 5-year period. Details of the agenda item can be found on our website CalPERS On-Line:

<http://www.calpers.ca.gov/index.jsp?bc=/about/committee-meetings/archives/pension-201304.xml>

Actuarial Assumptions

Economic Assumptions

Discount Rate

7.5% compounded annually (net of expenses). This assumption is used for all plans.

Termination Liability Discount Rate

The discount rate used for termination valuation is a weighted average of the 10 and 30-year US Treasury yields in effect on the valuation date that equal the duration of the pension liabilities. For purposes of this hypothetical termination liability estimate, the discount rate used, 2.98 percent, is the yield on the 30-year US Treasury Separate Trading of Registered Interest and Principal of Securities (STRIPS) as of June 30, 2012. Please note, as of June 30, 2013 the 30-year STRIPS yield was 3.72 percent.

Salary Growth

Annual increases vary by category, entry age, and duration of service. A sample of assumed increases are shown below.

Public Agency Miscellaneous

<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1420	0.1240	0.0980
1	0.1190	0.1050	0.0850
2	0.1010	0.0910	0.0750
3	0.0880	0.0800	0.0670
4	0.0780	0.0710	0.0610
5	0.0700	0.0650	0.0560
10	0.0480	0.0460	0.0410
15	0.0430	0.0410	0.0360
20	0.0390	0.0370	0.0330
25	0.0360	0.0360	0.0330
30	0.0360	0.0360	0.0330

Public Agency Fire

<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1050	0.1050	0.1020
1	0.0950	0.0940	0.0850
2	0.0870	0.0830	0.0700
3	0.0800	0.0750	0.0600
4	0.0740	0.0680	0.0510
5	0.0690	0.0620	0.0450
10	0.0510	0.0460	0.0350
15	0.0410	0.0390	0.0340
20	0.0370	0.0360	0.0330
25	0.0350	0.0350	0.0330
30	0.0350	0.0350	0.0330

Salary Growth (continued)

Public Agency Police			
Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)
0	0.1090	0.1090	0.1090
1	0.0930	0.0930	0.0930
2	0.0810	0.0810	0.0780
3	0.0720	0.0700	0.0640
4	0.0650	0.0610	0.0550
5	0.0590	0.0550	0.0480
10	0.0450	0.0420	0.0340
15	0.0410	0.0390	0.0330
20	0.0370	0.0360	0.0330
25	0.0350	0.0340	0.0330
30	0.0350	0.0340	0.0330

Public Agency County Peace Officers			
Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)
0	0.1290	0.1290	0.1290
1	0.1090	0.1060	0.1030
2	0.0940	0.0890	0.0840
3	0.0820	0.0770	0.0710
4	0.0730	0.0670	0.0610
5	0.0660	0.0600	0.0530
10	0.0460	0.0420	0.0380
15	0.0410	0.0380	0.0360
20	0.0370	0.0360	0.0340
25	0.0350	0.0340	0.0330
30	0.0350	0.0340	0.0330

Schools			
Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)
0	0.1080	0.0960	0.0820
1	0.0940	0.0850	0.0740
2	0.0840	0.0770	0.0670
3	0.0750	0.0700	0.0620
4	0.0690	0.0640	0.0570
5	0.0630	0.0600	0.0530
10	0.0450	0.0440	0.0410
15	0.0390	0.0380	0.0350
20	0.0360	0.0350	0.0320
25	0.0340	0.0340	0.0320
30	0.0340	0.0340	0.0320

- The Miscellaneous salary scale is used for Local Prosecutors.
- The Police salary scale is used for Other Safety, Local Sheriff, and School Police.

Overall Payroll Growth

3.00 percent compounded annually (used in projecting the payroll over which the unfunded liability is amortized). This assumption is used for all plans.

Inflation

2.75 percent compounded annually. This assumption is used for all plans.

Non-valued Potential Additional Liabilities

The potential liability loss for a cost-of-living increase exceeding the 2.75 percent inflation assumption, and any potential liability loss from future member service purchases are not reflected in the valuation.

Miscellaneous Loading Factors**Credit for Unused Sick Leave**

Total years of service is increased by 1 percent for those plans that have accepted the provision providing Credit for Unused Sick Leave.

Conversion of Employer Paid Member Contributions (EPMC)

Total years of service is increased by the Employee Contribution Rate for those plans with the provision providing for the Conversion of Employer Paid Member Contributions (EPMC) during the final compensation period.

Norris Decision (Best Factors)

Employees hired prior to July 1, 1982 have projected benefit amounts increased in order to reflect the use of "Best Factors" in the calculation of optional benefit forms. This is due to a 1983 Supreme Court decision, known as the Norris decision, which required males and females to be treated equally in the determination of benefit amounts. Consequently, anyone already employed at that time is given the best possible conversion factor when optional benefits are determined. No loading is necessary for employees hired after July 1, 1982.

Termination Liability

The termination liabilities include a 7 percent contingency load. This load is for unforeseen improvements in mortality.

Demographic Assumptions**Pre-Retirement Mortality**

Non-Industrial Death Rates vary by age and gender. Industrial Death rates vary by age. See sample rates in table below. The non-industrial death rates are used for all plans. The industrial death rates are used for Safety Plans (except for Local Prosecutor safety members where the corresponding Miscellaneous Plan does not have the Industrial Death Benefit).

Age	Non-Industrial Death (Not Job-Related)		Industrial Death (Job-Related)
	Male	Female	Male and Female
20	0.00047	0.00016	0.00003
25	0.00050	0.00026	0.00007
30	0.00053	0.00036	0.00010
35	0.00067	0.00046	0.00012
40	0.00087	0.00065	0.00013
45	0.00120	0.00093	0.00014
50	0.00176	0.00126	0.00015
55	0.00260	0.00176	0.00016
60	0.00395	0.00266	0.00017
65	0.00608	0.00419	0.00018
70	0.00914	0.00649	0.00019
75	0.01220	0.00878	0.00020
80	0.01527	0.01108	0.00021

Miscellaneous Plans usually have Industrial Death rates set to zero unless the agency has specifically contracted for Industrial Death benefits. If so, each Non-Industrial Death rate shown above will be split into two components; 99 percent will become the Non-Industrial Death rate and 1 percent will become the Industrial Death rate.

Post-Retirement Mortality

Rates vary by age, type of retirement and gender. See sample rates in table below. These rates are used for all plans.

Age	Healthy Recipients		Non-Industrially Disabled (Not Job-Related)		Industrially Disabled (Job-Related)	
	Male	Female	Male	Female	Male	Female
50	0.00239	0.00125	0.01632	0.01245	0.00443	0.00356
55	0.00474	0.00243	0.01936	0.01580	0.00563	0.00546
60	0.00720	0.00431	0.02293	0.01628	0.00777	0.00798
65	0.01069	0.00775	0.03174	0.01969	0.01388	0.01184
70	0.01675	0.01244	0.03870	0.03019	0.02236	0.01716
75	0.03080	0.02071	0.06001	0.03915	0.03585	0.02665
80	0.05270	0.03749	0.08388	0.05555	0.06926	0.04528
85	0.09775	0.07005	0.14035	0.09577	0.11799	0.08017
90	0.16747	0.12404	0.21554	0.14949	0.16575	0.13775
95	0.25659	0.21556	0.31025	0.23055	0.26108	0.23331
100	0.34551	0.31876	0.45905	0.37662	0.40918	0.35165
105	0.58527	0.56093	0.67923	0.61523	0.64127	0.60135
110	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

The mortality assumptions are based on mortality rates resulting from the most recent CalPERS Experience Study adopted by the CalPERS Board, first used in the June 30, 2009 valuation. For purposes of the post-retirement mortality rates, those revised rates include 5 years of projected on-going mortality improvement using Scale AA published by the Society of Actuaries until June 30, 2010. There is no margin for future mortality improvement beyond the valuation date. The mortality assumption will be reviewed with the next experience study expected to be completed for the June 30, 2013 valuation to determine an appropriate margin to be used.

Marital Status

For active members, a percentage who are married upon retirement is assumed according to member category as shown in the following table.

Member Category	Percent Married
Miscellaneous Member	85%
Local Police	90%
Local Fire	90%
Other Local Safety	90%
School Police	90%

Age of Spouse

It is assumed that female spouses are 3 years younger than male spouses are. This assumption is used for all plans.

Terminated Members

It is assumed that terminated members refund immediately if non-vested. Terminated members who are vested are assumed to follow the same service retirement pattern as active members but with a load to reflect the expected higher rates of retirement, especially at lower ages. The following table shows the load factors that are applied to the service retirement assumption for active members to obtain the service retirement pattern for separated vested members:

Age	Load Factor
50	450%
51	250%
52 through 56	200%
57 through 60	150%
61 through 64	125%
65 and above	100% (no change)

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ACTUARIAL METHODS AND ASSUMPTIONS

APPENDIX A

Termination with Refund

Rates vary by entry age and service for Miscellaneous Plans. Rates vary by service for Safety Plans.
See sample rates in tables below.

Public Agency Miscellaneous

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40	Entry Age 45
0	0.1742	0.1674	0.1606	0.1537	0.1468	0.1400
1	0.1545	0.1477	0.1409	0.1339	0.1271	0.1203
2	0.1348	0.1280	0.1212	0.1142	0.1074	0.1006
3	0.1151	0.1083	0.1015	0.0945	0.0877	0.0809
4	0.0954	0.0886	0.0818	0.0748	0.0680	0.0612
5	0.0212	0.0193	0.0174	0.0155	0.0136	0.0116
10	0.0138	0.0121	0.0104	0.0088	0.0071	0.0055
15	0.0060	0.0051	0.0042	0.0032	0.0023	0.0014
20	0.0037	0.0029	0.0021	0.0013	0.0005	0.0001
25	0.0017	0.0011	0.0005	0.0001	0.0001	0.0001
30	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001
35	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Public Agency Safety

Duration of Service	Fire	Police	County Peace Officer
0	0.0710	0.1013	0.0997
1	0.0554	0.0636	0.0782
2	0.0398	0.0271	0.0566
3	0.0242	0.0258	0.0437
4	0.0218	0.0245	0.0414
5	0.0029	0.0086	0.0145
10	0.0009	0.0053	0.0089
15	0.0006	0.0027	0.0045
20	0.0005	0.0017	0.0020
25	0.0003	0.0012	0.0009
30	0.0003	0.0009	0.0006
35	0.0003	0.0009	0.0006

The Police Termination and Refund rates are also used for Public Agency Local Prosecutors, Other Safety, Local Sheriff and School Police.

Schools

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40	Entry Age 45
0	0.1730	0.1627	0.1525	0.1422	0.1319	0.1217
1	0.1585	0.1482	0.1379	0.1277	0.1174	0.1071
2	0.1440	0.1336	0.1234	0.1131	0.1028	0.0926
3	0.1295	0.1192	0.1089	0.0987	0.0884	0.0781
4	0.1149	0.1046	0.0944	0.0841	0.0738	0.0636
5	0.0278	0.0249	0.0221	0.0192	0.0164	0.0135
10	0.0172	0.0147	0.0122	0.0098	0.0074	0.0049
15	0.0115	0.0094	0.0074	0.0053	0.0032	0.0011
20	0.0073	0.0055	0.0038	0.0020	0.0002	0.0002
25	0.0037	0.0023	0.0010	0.0002	0.0002	0.0002
30	0.0015	0.0003	0.0002	0.0002	0.0002	0.0002
35	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002

Termination with Vested Benefits

Rates vary by entry age and service for Miscellaneous Plans. Rates vary by service for Safety Plans.
See sample rates in tables below.

Public Agency Miscellaneous

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40
5	0.0656	0.0597	0.0537	0.0477	0.0418
10	0.0530	0.0466	0.0403	0.0339	0.0000
15	0.0443	0.0373	0.0305	0.0000	0.0000
20	0.0333	0.0261	0.0000	0.0000	0.0000
25	0.0212	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000

Public Agency Safety

Duration of Service	Fire	Police	County Peace Officer
5	0.0162	0.0163	0.0265
10	0.0061	0.0126	0.0204
15	0.0058	0.0082	0.0130
20	0.0053	0.0065	0.0074
25	0.0047	0.0058	0.0043
30	0.0045	0.0056	0.0030
35	0.0000	0.0000	0.0000

- When a member is eligible to retire, the termination with vested benefits probability is set to zero.
- After termination with vested benefits, a miscellaneous member is assumed to retire at age 59 and a safety member at age 54.
- The Police Termination with vested benefits rates are also used for Public Agency Local Prosecutors, Other Safety, Local Sheriff and School Police.

Schools

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40
5	0.0816	0.0733	0.0649	0.0566	0.0482
10	0.0629	0.0540	0.0450	0.0359	0.0000
15	0.0537	0.0440	0.0344	0.0000	0.0000
20	0.0420	0.0317	0.0000	0.0000	0.0000
25	0.0291	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000

Non-Industrial (Not Job-Related) Disability

Rates vary by age and gender for Miscellaneous Plans. Rates vary by age and category for Safety Plans.

Age	Miscellaneous		Fire	Police	County Peace Officer	Schools	
	Male	Female	Male and Female	Male and Female	Male and Female	Male	Female
20	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
25	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
30	0.0002	0.0002	0.0001	0.0002	0.0001	0.0002	0.0001
35	0.0006	0.0009	0.0001	0.0003	0.0004	0.0006	0.0004
40	0.0015	0.0016	0.0001	0.0004	0.0007	0.0014	0.0009
45	0.0025	0.0024	0.0002	0.0005	0.0013	0.0028	0.0017
50	0.0033	0.0031	0.0005	0.0008	0.0018	0.0044	0.0030
55	0.0037	0.0031	0.0010	0.0013	0.0010	0.0049	0.0034
60	0.0038	0.0025	0.0015	0.0020	0.0006	0.0043	0.0024

- The Miscellaneous Non-Industrial Disability rates are used for Local Prosecutors.
- The Police Non-Industrial Disability rates are also used for Other Safety, Local Sheriff and School Police.

Industrial (Job-Related) Disability

Rates vary by age and category.

Age	Fire	Police	County Peace Officer
20	0.0002	0.0007	0.0003
25	0.0012	0.0032	0.0015
30	0.0025	0.0064	0.0031
35	0.0037	0.0097	0.0046
40	0.0049	0.0129	0.0063
45	0.0061	0.0161	0.0078
50	0.0074	0.0192	0.0101
55	0.0721	0.0668	0.0173
60	0.0721	0.0668	0.0173

- The Police Industrial Disability rates are also used for Local Sheriff and Other Safety.
- Fifty Percent of the Police Industrial Disability rates are used for School Police.
- One Percent of the Police Industrial Disability rates are used for Local Prosecutors.
- Normally, rates are zero for Miscellaneous Plans unless the agency has specifically contracted for Industrial Disability benefits. If so, each miscellaneous non-industrial disability rate will be split into two components: 50 percent will become the Non-Industrial Disability rate and 50 percent will become the Industrial Disability rate.

Service Retirement

Retirement rates vary by age, service, and formula, except for the safety $\frac{1}{2}$ @ 55 and 2% @ 55 formulas, where retirement rates vary by age only.

Service Retirement**Public Agency Miscellaneous 1.5% @ 65**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.008	0.011	0.013	0.015	0.017	0.019
51	0.007	0.010	0.012	0.013	0.015	0.017
52	0.010	0.014	0.017	0.019	0.021	0.024
53	0.008	0.012	0.015	0.017	0.019	0.022
54	0.012	0.016	0.019	0.022	0.025	0.028
55	0.018	0.025	0.031	0.035	0.038	0.043
56	0.015	0.021	0.025	0.029	0.032	0.036
57	0.020	0.028	0.033	0.038	0.043	0.048
58	0.024	0.033	0.040	0.046	0.052	0.058
59	0.028	0.039	0.048	0.054	0.060	0.067
60	0.049	0.069	0.083	0.094	0.105	0.118
61	0.062	0.087	0.106	0.120	0.133	0.150
62	0.104	0.146	0.177	0.200	0.223	0.251
63	0.099	0.139	0.169	0.191	0.213	0.239
64	0.097	0.136	0.165	0.186	0.209	0.233
65	0.140	0.197	0.240	0.271	0.302	0.339
66	0.092	0.130	0.157	0.177	0.198	0.222
67	0.129	0.181	0.220	0.249	0.277	0.311
68	0.092	0.129	0.156	0.177	0.197	0.221
69	0.092	0.130	0.158	0.178	0.199	0.224
70	0.103	0.144	0.175	0.198	0.221	0.248

Public Agency Miscellaneous 2% @ 60

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.011	0.015	0.018	0.021	0.023	0.026
51	0.009	0.013	0.016	0.018	0.020	0.023
52	0.013	0.018	0.022	0.025	0.028	0.031
53	0.011	0.016	0.019	0.022	0.025	0.028
54	0.015	0.021	0.025	0.028	0.032	0.036
55	0.023	0.032	0.039	0.044	0.049	0.055
56	0.019	0.027	0.032	0.037	0.041	0.046
57	0.025	0.035	0.042	0.048	0.054	0.060
58	0.030	0.042	0.051	0.058	0.065	0.073
59	0.035	0.049	0.060	0.068	0.076	0.085
60	0.062	0.087	0.105	0.119	0.133	0.149
61	0.079	0.110	0.134	0.152	0.169	0.190
62	0.132	0.186	0.225	0.255	0.284	0.319
63	0.126	0.178	0.216	0.244	0.272	0.305
64	0.122	0.171	0.207	0.234	0.262	0.293
65	0.173	0.243	0.296	0.334	0.373	0.418
66	0.114	0.160	0.194	0.219	0.245	0.274
67	0.159	0.223	0.271	0.307	0.342	0.384
68	0.113	0.159	0.193	0.218	0.243	0.273
69	0.114	0.161	0.195	0.220	0.246	0.276
70	0.127	0.178	0.216	0.244	0.273	0.306

Service Retirement**Public Agency Miscellaneous 2% @ 55**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.015	0.020	0.024	0.029	0.033	0.039
51	0.013	0.016	0.020	0.024	0.027	0.033
52	0.014	0.018	0.022	0.027	0.030	0.036
53	0.017	0.022	0.027	0.032	0.037	0.043
54	0.027	0.034	0.041	0.049	0.056	0.067
55	0.050	0.064	0.078	0.094	0.107	0.127
56	0.045	0.057	0.069	0.083	0.095	0.113
57	0.048	0.061	0.074	0.090	0.102	0.122
58	0.052	0.066	0.080	0.097	0.110	0.131
59	0.060	0.076	0.092	0.111	0.127	0.151
60	0.072	0.092	0.112	0.134	0.153	0.182
61	0.089	0.113	0.137	0.165	0.188	0.224
62	0.128	0.162	0.197	0.237	0.270	0.322
63	0.129	0.164	0.199	0.239	0.273	0.325
64	0.116	0.148	0.180	0.216	0.247	0.294
65	0.174	0.221	0.269	0.323	0.369	0.439
66	0.135	0.171	0.208	0.250	0.285	0.340
67	0.133	0.169	0.206	0.247	0.282	0.336
68	0.118	0.150	0.182	0.219	0.250	0.297
69	0.116	0.147	0.179	0.215	0.246	0.293
70	0.138	0.176	0.214	0.257	0.293	0.349

Public Agency Miscellaneous 2.5% @ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.026	0.033	0.040	0.048	0.055	0.062
51	0.021	0.026	0.032	0.038	0.043	0.049
52	0.021	0.026	0.032	0.038	0.043	0.049
53	0.026	0.033	0.040	0.048	0.055	0.062
54	0.043	0.054	0.066	0.078	0.089	0.101
55	0.088	0.112	0.136	0.160	0.184	0.208
56	0.055	0.070	0.085	0.100	0.115	0.130
57	0.061	0.077	0.094	0.110	0.127	0.143
58	0.072	0.091	0.111	0.130	0.150	0.169
59	0.083	0.105	0.128	0.150	0.173	0.195
60	0.088	0.112	0.136	0.160	0.184	0.208
61	0.083	0.105	0.128	0.150	0.173	0.195
62	0.121	0.154	0.187	0.220	0.253	0.286
63	0.105	0.133	0.162	0.190	0.219	0.247
64	0.105	0.133	0.162	0.190	0.219	0.247
65	0.143	0.182	0.221	0.260	0.299	0.338
66	0.105	0.133	0.162	0.190	0.219	0.247
67	0.105	0.133	0.162	0.190	0.219	0.247
68	0.105	0.133	0.162	0.190	0.219	0.247
69	0.105	0.133	0.162	0.190	0.219	0.247
70	0.125	0.160	0.194	0.228	0.262	0.296

Service Retirement**Public Agency Miscellaneous 2.7% @ 55**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.028	0.035	0.043	0.050	0.058	0.065
51	0.022	0.028	0.034	0.040	0.046	0.052
52	0.022	0.028	0.034	0.040	0.046	0.052
53	0.028	0.035	0.043	0.050	0.058	0.065
54	0.044	0.056	0.068	0.080	0.092	0.104
55	0.091	0.116	0.140	0.165	0.190	0.215
56	0.061	0.077	0.094	0.110	0.127	0.143
57	0.063	0.081	0.098	0.115	0.132	0.150
58	0.074	0.095	0.115	0.135	0.155	0.176
59	0.083	0.105	0.128	0.150	0.173	0.195
60	0.088	0.112	0.136	0.160	0.184	0.208
61	0.085	0.109	0.132	0.155	0.178	0.202
62	0.124	0.158	0.191	0.225	0.259	0.293
63	0.107	0.137	0.166	0.195	0.224	0.254
64	0.107	0.137	0.166	0.195	0.224	0.254
65	0.146	0.186	0.225	0.265	0.305	0.345
66	0.107	0.137	0.166	0.195	0.224	0.254
67	0.107	0.137	0.166	0.195	0.224	0.254
68	0.107	0.137	0.166	0.195	0.224	0.254
69	0.107	0.137	0.166	0.195	0.224	0.254
70	0.129	0.164	0.199	0.234	0.269	0.304

Public Agency Miscellaneous 3% @ 60

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.026	0.033	0.040	0.048	0.055	0.062
51	0.021	0.026	0.032	0.038	0.043	0.049
52	0.019	0.025	0.030	0.035	0.040	0.046
53	0.025	0.032	0.038	0.045	0.052	0.059
54	0.039	0.049	0.060	0.070	0.081	0.091
55	0.083	0.105	0.128	0.150	0.173	0.195
56	0.055	0.070	0.085	0.100	0.115	0.130
57	0.061	0.077	0.094	0.110	0.127	0.143
58	0.072	0.091	0.111	0.130	0.150	0.169
59	0.080	0.102	0.123	0.145	0.167	0.189
60	0.094	0.119	0.145	0.170	0.196	0.221
61	0.088	0.112	0.136	0.160	0.184	0.208
62	0.127	0.161	0.196	0.230	0.265	0.299
63	0.110	0.140	0.170	0.200	0.230	0.260
64	0.110	0.140	0.170	0.200	0.230	0.260
65	0.149	0.189	0.230	0.270	0.311	0.351
66	0.110	0.140	0.170	0.200	0.230	0.260
67	0.110	0.140	0.170	0.200	0.230	0.260
68	0.110	0.140	0.170	0.200	0.230	0.260
69	0.110	0.140	0.170	0.200	0.230	0.260
70	0.132	0.168	0.204	0.240	0.276	0.312

Service Retirement**Public Agency Fire ½ @ 55 and 2% @ 55**

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
50	0.01588	56	0.11079
51	0.00000	57	0.00000
52	0.03442	58	0.09499
53	0.01990	59	0.04409
54	0.04132	60	1.00000
55	0.07513		

Public Agency Police ½ @ 55 and 2% @ 55

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
50	0.02552	56	0.06921
51	0.00000	57	0.05113
52	0.01637	58	0.07241
53	0.02717	59	0.07043
54	0.00949	60	1.00000
55	0.16674		

Public Agency Police 2%@ 50

<u>Age</u>	<u>Duration of Service</u>					
	<u>5 Years</u>	<u>10 Years</u>	<u>15 Years</u>	<u>20 Years</u>	<u>25 Years</u>	<u>30 Years</u>
50	0.014	0.014	0.014	0.014	0.025	0.045
51	0.012	0.012	0.012	0.012	0.023	0.040
52	0.026	0.026	0.026	0.026	0.048	0.086
53	0.052	0.052	0.052	0.052	0.096	0.171
54	0.070	0.070	0.070	0.070	0.128	0.227
55	0.090	0.090	0.090	0.090	0.165	0.293
56	0.064	0.064	0.064	0.064	0.117	0.208
57	0.071	0.071	0.071	0.071	0.130	0.232
58	0.063	0.063	0.063	0.063	0.115	0.205
59	0.140	0.140	0.140	0.140	0.174	0.254
60	0.140	0.140	0.140	0.140	0.172	0.251
61	0.140	0.140	0.140	0.140	0.172	0.251
62	0.140	0.140	0.140	0.140	0.172	0.251
63	0.140	0.140	0.140	0.140	0.172	0.251
64	0.140	0.140	0.140	0.140	0.172	0.251
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police and Other Safety.

Service Retirement

Public Agency Fire 2%@50						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.007	0.007	0.007	0.007	0.010	0.015
51	0.008	0.008	0.008	0.008	0.013	0.019
52	0.017	0.017	0.017	0.017	0.027	0.040
53	0.047	0.047	0.047	0.047	0.072	0.107
54	0.064	0.064	0.064	0.064	0.098	0.147
55	0.087	0.087	0.087	0.087	0.134	0.200
56	0.078	0.078	0.078	0.078	0.120	0.180
57	0.090	0.090	0.090	0.090	0.139	0.208
58	0.079	0.079	0.079	0.079	0.122	0.182
59	0.073	0.073	0.073	0.073	0.112	0.168
60	0.114	0.114	0.114	0.114	0.175	0.262
61	0.114	0.114	0.114	0.114	0.175	0.262
62	0.114	0.114	0.114	0.114	0.175	0.262
63	0.114	0.114	0.114	0.114	0.175	0.262
64	0.114	0.114	0.114	0.114	0.175	0.262
65	1.000	1.000	1.000	1.000	1.000	1.000

Public Agency Police 3%@ 55						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.019	0.019	0.019	0.019	0.040	0.060
51	0.024	0.024	0.024	0.024	0.049	0.074
52	0.024	0.024	0.024	0.024	0.051	0.077
53	0.059	0.059	0.059	0.059	0.121	0.183
54	0.069	0.069	0.069	0.069	0.142	0.215
55	0.116	0.116	0.116	0.116	0.240	0.363
56	0.076	0.076	0.076	0.076	0.156	0.236
57	0.058	0.058	0.058	0.058	0.120	0.181
58	0.076	0.076	0.076	0.076	0.157	0.237
59	0.094	0.094	0.094	0.094	0.193	0.292
60	0.141	0.141	0.141	0.141	0.290	0.438
61	0.094	0.094	0.094	0.094	0.193	0.292
62	0.118	0.118	0.118	0.118	0.241	0.365
63	0.094	0.094	0.094	0.094	0.193	0.292
64	0.094	0.094	0.094	0.094	0.193	0.292
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police and Other Safety.

Service Retirement**Public Agency Fire 3%@55**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.012	0.012	0.012	0.018	0.028	0.033
51	0.008	0.008	0.008	0.012	0.019	0.022
52	0.018	0.018	0.018	0.027	0.042	0.050
53	0.043	0.043	0.043	0.062	0.098	0.114
54	0.057	0.057	0.057	0.083	0.131	0.152
55	0.092	0.092	0.092	0.134	0.211	0.246
56	0.081	0.081	0.081	0.118	0.187	0.218
57	0.100	0.100	0.100	0.146	0.230	0.268
58	0.081	0.081	0.081	0.119	0.187	0.219
59	0.078	0.078	0.078	0.113	0.178	0.208
60	0.117	0.117	0.117	0.170	0.267	0.312
61	0.078	0.078	0.078	0.113	0.178	0.208
62	0.098	0.098	0.098	0.141	0.223	0.260
63	0.078	0.078	0.078	0.113	0.178	0.208
64	0.078	0.078	0.078	0.113	0.178	0.208
65	1.000	1.000	1.000	1.000	1.000	1.000

Public Agency Police 3%@ 50

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.070	0.070	0.070	0.131	0.193	0.249
51	0.050	0.050	0.050	0.095	0.139	0.180
52	0.061	0.061	0.061	0.116	0.171	0.220
53	0.069	0.069	0.069	0.130	0.192	0.247
54	0.071	0.071	0.071	0.134	0.197	0.255
55	0.090	0.090	0.090	0.170	0.250	0.322
56	0.069	0.069	0.069	0.130	0.191	0.247
57	0.080	0.080	0.080	0.152	0.223	0.288
58	0.087	0.087	0.087	0.164	0.242	0.312
59	0.090	0.090	0.090	0.170	0.251	0.323
60	0.135	0.135	0.135	0.255	0.377	0.485
61	0.090	0.090	0.090	0.170	0.251	0.323
62	0.113	0.113	0.113	0.213	0.314	0.404
63	0.090	0.090	0.090	0.170	0.251	0.323
64	0.090	0.090	0.090	0.170	0.251	0.323
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police and Other Safety.

Service Retirement**Public Agency Fire 3%@50**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.034	0.034	0.034	0.048	0.068	0.080
51	0.046	0.046	0.046	0.065	0.092	0.109
52	0.069	0.069	0.069	0.097	0.138	0.163
53	0.084	0.084	0.084	0.117	0.166	0.197
54	0.103	0.103	0.103	0.143	0.204	0.241
55	0.127	0.127	0.127	0.177	0.252	0.298
56	0.121	0.121	0.121	0.169	0.241	0.285
57	0.101	0.101	0.101	0.141	0.201	0.238
58	0.118	0.118	0.118	0.165	0.235	0.279
59	0.100	0.100	0.100	0.140	0.199	0.236
60	0.150	0.150	0.150	0.210	0.299	0.354
61	0.100	0.100	0.100	0.140	0.199	0.236
62	0.125	0.125	0.125	0.175	0.249	0.295
63	0.100	0.100	0.100	0.140	0.199	0.236
64	0.100	0.100	0.100	0.140	0.199	0.236
65	1.000	1.000	1.000	1.000	1.000	1.000

Schools 2%@ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.005	0.009	0.013	0.015	0.016	0.018
51	0.005	0.010	0.014	0.017	0.019	0.021
52	0.006	0.012	0.017	0.020	0.022	0.025
53	0.007	0.014	0.019	0.023	0.026	0.029
54	0.012	0.024	0.033	0.039	0.044	0.049
55	0.024	0.048	0.067	0.079	0.088	0.099
56	0.020	0.039	0.055	0.065	0.072	0.081
57	0.021	0.042	0.059	0.070	0.078	0.087
58	0.025	0.050	0.070	0.083	0.092	0.103
59	0.029	0.057	0.080	0.095	0.105	0.118
60	0.037	0.073	0.102	0.121	0.134	0.150
61	0.046	0.090	0.126	0.149	0.166	0.186
62	0.076	0.151	0.212	0.250	0.278	0.311
63	0.069	0.136	0.191	0.225	0.251	0.281
64	0.067	0.133	0.185	0.219	0.244	0.273
65	0.091	0.180	0.251	0.297	0.331	0.370
66	0.072	0.143	0.200	0.237	0.264	0.295
67	0.067	0.132	0.185	0.218	0.243	0.272
68	0.060	0.118	0.165	0.195	0.217	0.243
69	0.067	0.133	0.187	0.220	0.246	0.275
70	0.066	0.131	0.183	0.216	0.241	0.270

Miscellaneous

Superfunded Status

Prior to enactment of the Public Employees' Pension Reform Act (PEPRA) that became effective January 1, 2013, a plan in superfunded status (actuarial value of assets exceeding present value of benefits) would normally pay a zero employer contribution rate while also being permitted to use its superfunded assets to pay its employees' normal member contributions.

However, Section 7522.52(a) of PEPRA states, "In any fiscal year a public employer's contribution to a defined benefit plan, in combination with employee contributions to that defined benefit plan, shall not be less than the total normal cost rate..." This means that not only must employers pay their employer normal cost regardless of plan surplus, but also, employers may no longer use superfunded assets to pay employee normal member contributions.

Internal Revenue Code Section 415

The limitations on benefits imposed by Internal Revenue Code Section 415 are taken into account in this valuation. Each year the impact of any changes in this limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base. This results in lower contributions for those employers contributing to the Replacement Benefit Fund and protects CalPERS from prefunding expected benefits in excess of limits imposed by federal tax law.

Internal Revenue Code Section 401(a)(17)

The limitations on compensation imposed by Internal Revenue Code Section 401(a)(17) are taken into account in this valuation. Each year, the impact of any changes in the compensation limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base.

PEPRA Assumptions

The Public Employees' Pension Reform Act of 2013 (PEPRA) mandated new benefit formulas and new member contributions for new members (as defined by PEPRA) hired after January 1, 2013. For non-pooled plans, these new members will first be reflected in the June 30, 2013 non-pooled plan valuations. New members in pooled plans will first be reflected in the new Miscellaneous and Safety risk pools created by the CalPERS Board in November 2012 in response to the passage of PEPRA, also beginning with the June 30, 2013 valuation. Different assumptions for these new PEPRA members will be disclosed in the 2013 valuation.

APPENDIX B

PRINCIPAL PLAN PROVISIONS

The following is a description of the principal plan provisions used in calculating costs and liabilities. We have indicated whether a plan provision is standard or optional. Standard benefits are applicable to all members while optional benefits vary among employers. Optional benefits that apply to a single period of time, such as Golden Handshakes, have not been included. Many of the statements in this summary are general in nature, and are intended to provide an easily understood summary of the complex Public Employees' Retirement Law. The law itself governs in all situations.

PEPRA Benefit Changes

The Public Employees' Pension Reform Act of 2013 (PEPRA) requires new benefits and member contributions for new members as defined by PEPRA, that are hired after January 1, 2013. For non-pooled plans, these members will first be reflected in June 30, 2013 non-pooled plan valuations. Members in pooled plans will be reflected in the new Miscellaneous and Safety risk pools created by the CalPERS Board in November 2012 in response to the passage of PEPRA, beginning with the June 30, 2013 valuation.

Service Retirement

Eligibility

A classic CalPERS member becomes eligible for Service Retirement upon attainment of age 50 with at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements). For employees hired into a plan with the 1.5% at 65 formula, eligibility for service retirement is age 55 with at least 5 years of service.

Benefit

The Service Retirement benefit is a monthly allowance equal to the product of the *benefit factor*, *years of service*, and *final compensation*.

- The *benefit factor* depends on the benefit formula specified in your agency's contract. The table below shows the factors for each of the available formulas. Factors vary by the member's age at retirement. Listed are the factors for retirement at whole year ages:

Miscellaneous Plan Formulas

Retirement Age	1.5% at 65	2% at 60	2% at 55	2.5% at 55	2.7% at 55	3% at 60
50	0.5000%	1.092%	1.426%	2.0%	2.0%	2.0%
51	0.5667%	1.156%	1.522%	2.1%	2.14%	2.1%
52	0.6334%	1.224%	1.628%	2.2%	2.28%	2.2%
53	0.7000%	1.296%	1.742%	2.3%	2.42%	2.3%
54	0.7667%	1.376%	1.866%	2.4%	2.56%	2.4%
55	0.8334%	1.460%	2.0%	2.5%	2.7%	2.5%
56	0.9000%	1.552%	2.052%	2.5%	2.7%	2.6%
57	0.9667%	1.650%	2.104%	2.5%	2.7%	2.7%
58	1.0334%	1.758%	2.156%	2.5%	2.7%	2.8%
59	1.1000%	1.874%	2.210%	2.5%	2.7%	2.9%
60	1.1667%	2.0%	2.262%	2.5%	2.7%	3.0%
61	1.2334%	2.134%	2.314%	2.5%	2.7%	3.0%
62	1.3000%	2.272%	2.366%	2.5%	2.7%	3.0%
63	1.3667%	2.418%	2.418%	2.5%	2.7%	3.0%
64	1.4334%	2.418%	2.418%	2.5%	2.7%	3.0%
65 & Up	1.5000%	2.418%	2.418%	2.5%	2.7%	3.0%

Safety Plan Formulas

Retirement Age	½ at 55 *	2% at 55	2% at 50	3% at 55	3% at 50
50	1.783%	1.426%	2.0%	2.40%	3.0%
51	1.903%	1.522%	2.14%	2.52%	3.0%
52	2.035%	1.628%	2.28%	2.64%	3.0%
53	2.178%	1.742%	2.42%	2.76%	3.0%
54	2.333%	1.866%	2.56%	2.88%	3.0%
55 & Up	2.5%	2.0%	2.7%	3.0%	3.0%

* For this formula, the benefit factor also varies by entry age. The factors shown are for members with an entry age of 35 or greater. If entry age is less than 35, then the age 55 benefit factor is 50% divided by the difference between age 55 and entry age. The benefit factor for ages prior to age 55 is the same proportion of the age 55 benefit factor as in the above table.

- The *years of service* is the amount credited by CalPERS to a member while he or she is employed in this group (or for other periods that are recognized under the employer's contract with CalPERS). For a member who has earned service with multiple CalPERS employers, the benefit from each employer is calculated separately according to each employer's contract, and then added together for the total allowance. An agency may contract for an optional benefit where any unused sick leave accumulated at the time of retirement will be converted to credited service at a rate of 0.004 years of service for each day of sick leave.
- The *final compensation* is the monthly average of the member's highest 36 or 12 consecutive months' full-time equivalent monthly pay (no matter which CalPERS employer paid this compensation). The standard benefit is 36 months. Employers have the option of providing a final compensation equal to the highest 12 consecutive months. Final compensation must be defined by the highest 36 consecutive months' pay under the 1.5% at 65 formula.
- Employees must be covered by Social Security with the 1.5% at 65 formula. Social Security is optional for all other benefit formulas. For employees covered by Social Security, the Modified formula is the standard benefit. Under this type of formula, the final compensation is offset by \$133.33 (or by one third if the final compensation is less than \$400). Employers may contract for the Full benefit with Social Security that will eliminate the offset applicable to the final compensation. For employees not covered by Social Security, the Full benefit is paid with no offsets. Auxiliary organizations of the CSUC system may elect reduced contribution rates, in which case the offset is \$317 if members are not covered by Social Security or \$513 if members are covered by Social Security.
- The Miscellaneous Service Retirement benefit is not capped. The Safety Service Retirement benefit is capped at 90 percent of final compensation.

Vested Deferred Retirement**Eligibility for Deferred Status**

A CalPERS member becomes eligible for a deferred vested retirement benefit when he or she leaves employment, keeps his or her contribution account balance on deposit with CalPERS, **and** has earned at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements).

Eligibility to Start Receiving Benefits

The CalPERS member becomes eligible to receive the deferred retirement benefit upon satisfying the eligibility requirements for Deferred Status and upon attainment of age 50 (55 for employees hired into a 1.5% @ 65 plan).

Benefit

The vested deferred retirement benefit is the same as the Service Retirement benefit, where the benefit factor is based on the member's age at allowance commencement. For members who have earned service with multiple CalPERS employers, the benefit from each employer is calculated separately according to each employer's contract, and then added together for the total allowance.

Non-Industrial (Non-Job Related) Disability Retirement

Eligibility

A CalPERS member is eligible for Non-Industrial Disability Retirement if he or she becomes *disabled* and has at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements). There is no special age requirement. *Disabled* means the member is unable to perform his or her job because of an illness or injury, which is expected to be permanent or to last indefinitely. The illness or injury does not have to be job related. A CalPERS member must be actively employed by any CalPERS employer at the time of disability in order to be eligible for this benefit.

Standard Benefit

The standard Non-Industrial Disability Retirement benefit is a monthly allowance equal to 1.8 percent of final compensation, multiplied by *service*, which is determined as follows:

- *Service* is CalPERS credited service, for members with less than 10 years of service or greater than 18.518 years of service; or
- *Service* is CalPERS credited service plus the additional number of years that the member would have worked until age 60, for members with at least 10 years but not more than 18.518 years of service. The maximum benefit in this case is 33 1/3 percent of Final Compensation.

Improved Benefit

Employers have the option of providing the improved Non-Industrial Disability Retirement benefit. This benefit provides a monthly allowance equal to 30% of final compensation for the first 5 years of service, plus 1% for each additional year of service to a maximum of 50% of final compensation.

Members who are eligible for a larger service retirement benefit may choose to receive that benefit in lieu of a disability benefit. Members eligible to retire, and who have attained the normal retirement age determined by their service retirement benefit formula, will receive the same dollar amount for disability retirement as that payable for service retirement. For members who have earned service with multiple CalPERS employers, the benefit attributed to each employer is the total disability allowance multiplied by the ratio of service with a particular employer to the total CalPERS service.

Industrial (Job Related) Disability Retirement

All safety members have this benefit. For miscellaneous members, employers have the option of providing this benefit. An employer may choose to provide the Increased benefit option or the Improved benefit option.

Eligibility

An employee is eligible for Industrial Disability Retirement if he or she becomes disabled while working, where disabled means the member is unable to perform the duties of the job because of a work-related illness or injury, which is, expected to be permanent or to last indefinitely. A CalPERS member who has left active employment within this group is not eligible for this benefit, except to the extent described below.

Standard Benefit

The standard Industrial Disability Retirement benefit is a monthly allowance equal to 50 percent of final compensation.

Increased Benefit (75 percent of Final Compensation)

The increased Industrial Disability Retirement benefit is a monthly allowance equal to 75 percent final compensation for total disability.

Improved Benefit (50 percent to 90 percent of Final Compensation)

The improved Industrial Disability Retirement benefit is a monthly allowance equal to the Workman's Compensation Appeals Board permanent disability rate percentage (if 50 percent or greater, with a maximum of 90 percent) times the final compensation.

For a CalPERS member not actively employed in this group who became disabled while employed by some other CalPERS employer, the benefit is a return of accumulated member contributions with respect to employment in this group. With the standard or increased benefit, a member may also choose to receive the annuitization of the accumulated member contributions.

If a member is eligible for Service Retirement and if the Service Retirement benefit is more than the Industrial Disability Retirement benefit, the member may choose to receive the larger benefit.

Post-Retirement Death Benefit

Standard Lump Sum Payment

Upon the death of a retiree, a one-time lump sum payment of \$500 will be made to the retiree's designated survivor(s), or to the retiree's estate.

Improved Lump Sum Payment

Employers have the option of providing an improved lump sum death benefit of \$600, \$2,000, \$3,000, \$4,000 or \$5,000.

Form of Payment for Retirement Allowance

Standard Form of Payment

Generally, the retirement allowance is paid to the retiree in the form of an annuity for as long as he or she is alive. The retiree may choose to provide for a portion of his or her allowance to be paid to any designated beneficiary after the retiree's death. CalPERS provides for a variety of such benefit options, which the retiree pays for by taking a reduction in his or her retirement allowance. Such reduction takes into account the amount to be provided to the beneficiary and the probable duration of payments (based on the ages of the member and beneficiary) made subsequent to the member's death.

Improved Form of Payment (Post Retirement Survivor Allowance)

Employers have the option to contract for the post retirement survivor allowance.

For retirement allowances with respect to service subject to the modified formula, 25 percent of the retirement allowance will automatically be continued to certain statutory beneficiaries upon the death of the retiree, without a reduction in the retiree's allowance. For retirement allowances with respect to service subject to the full or supplemental formula, 50 percent of the retirement allowance will automatically be continued to certain statutory beneficiaries upon the death of the retiree, without a reduction in the retiree's allowance. This additional benefit is often referred to as post retirement survivor allowance (PRSA) or simply as survivor continuance.

In other words, 25 percent or 50 percent of the allowance, the continuance portion, is paid to the retiree for as long as he or she is alive, and that same amount is continued to the retiree's spouse (or if no eligible spouse, to unmarried children until they attain age 18; or, if no eligible children, to a qualifying dependent parent) for the rest of his or her lifetime. This benefit will not be discontinued in the event the spouse remarries.

The remaining 75 percent or 50 percent of the retirement allowance, which may be referred to as the option portion of the benefit, is paid to the retiree as an annuity for as long as he or she is alive. Or, the retiree may choose to provide for some of this option portion to be paid to any designated beneficiary after the retiree's death. Benefit options applicable to the option portion are the same as those offered with the standard form. The reduction is calculated in the same manner but is applied only to the option portion.

Pre-Retirement Death Benefits

Basic Death Benefit

This is a standard benefit.

Eligibility

An employee's beneficiary (or estate) may receive the Basic Death benefit if the member dies while actively employed. A CalPERS member must be actively employed with the CalPERS employer providing this benefit to be eligible for this benefit. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this Basic Death benefit.

Benefit

The Basic Death Benefit is a lump sum in the amount of the member's accumulated contributions, where interest is currently credited at 7.5 percent per year, plus a lump sum in the amount of one month's salary for each completed year of current service, up to a maximum of six months' salary. For purposes of this benefit, one month's salary is defined as the member's average monthly full-time rate of compensation during the 12 months preceding death.

1957 Survivor Benefit

This is a standard benefit.

Eligibility

An employee's *eligible survivor(s)* may receive the 1957 Survivor benefit if the member dies while actively employed, has attained at least age 50, and has at least 5 years of credited service (total service across all CalPERS employers and with certain other Retirement Systems with which CalPERS has reciprocity agreements). A CalPERS member must be actively employed with the CalPERS employer providing this benefit to be eligible for this benefit. An eligible survivor means the surviving spouse to whom the member was married at least one year before death or, if there is no eligible spouse, to the member's unmarried children under age 18. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this 1957 Survivor benefit.

Benefit

The 1957 Survivor benefit is a monthly allowance equal to one-half of the unmodified Service Retirement benefit that the member would have been entitled to receive if the member had retired on the date of his or her death. If the benefit is payable to the spouse, the benefit is discontinued upon the death of the spouse. If the benefit is payable to a dependent child, the benefit will be discontinued upon death or attainment of age 18, unless the child is disabled. The total amount paid will be at least equal to the Basic Death benefit.

Optional Settlement 2W Death Benefit

This is an optional benefit.

Eligibility

An employee's *eligible survivor* may receive the Optional Settlement 2W Death benefit if the member dies while actively employed, has attained at least age 50, and has at least 5 years of credited service (total service across all CalPERS employers and with certain other Retirement Systems with which CalPERS has reciprocity agreements). A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married at least one year before death. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this Optional Settlement 2W Death benefit.

Benefit

The Optional Settlement 2W Death benefit is a monthly allowance equal to the Service Retirement benefit that the member would have received had the member retired on the date of his or her death and elected Optional Settlement 2W. (A retiree who elects Optional Settlement 2W receives an allowance that has been reduced so that it will continue to be paid after his or her death to a surviving beneficiary.) The allowance is payable as long as the surviving spouse lives, at which time it is continued to any unmarried children under age 18, if applicable. The total amount paid will be at least equal to the Basic Death Benefit.

Special Death Benefit

This is a standard benefit for safety members. An employer may elect to provide this benefit for miscellaneous members.

Eligibility

An employee's *eligible survivor(s)* may receive the Special Death benefit if the member dies while actively employed and the death is job-related. A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married prior to the onset of the injury or illness that resulted in death. If there is no eligible spouse, an eligible survivor means the member's unmarried children under age 22. An eligible survivor who chooses to receive this benefit will not receive any other death benefit.

Benefit

The Special Death benefit is a monthly allowance equal to 50% of final compensation, and will be increased whenever the compensation paid to active employees is increased but ceasing to increase when the member would have attained age 50. The allowance is payable to the surviving spouse until death at which time the allowance is continued to any unmarried children under age 22. There is a guarantee that the total amount paid will at least equal the Basic Death Benefit.

If the member's death is the result of an accident or injury caused by external violence or physical force incurred in the performance of the member's duty, and there are *eligible* surviving children (*eligible* means unmarried children under age 22) in addition to an eligible spouse, then an **additional monthly allowance** is paid equal to the following:

- | | |
|-----------------------------------|-----------------------------|
| • if 1 eligible child: | 12.5% of final compensation |
| • if 2 eligible children: | 20.0% of final compensation |
| • if 3 or more eligible children: | 25.0% of final compensation |

Alternate Death Benefit for Local Fire Members

This is an optional benefit available only to local fire members.

Eligibility

An employee's *eligible survivor(s)* may receive the Alternate Death benefit in lieu of the Basic Death Benefit or the 1957 Survivor Benefit if the member dies while actively employed and has at least 20 years of total CalPERS service. A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married prior to the onset of the injury or illness that resulted in death. If there is no eligible spouse, an eligible survivor means the member's unmarried children under age 18.

Benefit

The Alternate Death benefit is a monthly allowance equal to the Service Retirement benefit that the member would have received had the member retired on the date of his or her death and elected Optional Settlement 2W. (A retiree who elects Optional Settlement 2W receives an allowance that has been reduced so that it will continue to be paid after his or her death to a surviving beneficiary.) If the member has not yet attained age 50, the benefit is equal to that which would be payable if the member had retired at age 50, based on service credited at the time of death. The allowance is payable as long as the surviving spouse lives, at which time it is continued to any unmarried children under age 18, if applicable. The total amount paid will be at least equal to the Basic Death Benefit.

Cost-of-Living Adjustments (COLA)

Standard Benefit

Beginning the second calendar year after the year of retirement, retirement and survivor allowances will be annually adjusted on a compound basis by 2 percent.

Improved Benefit

Employers have the option of providing any of these improved cost-of-living adjustments by contracting for any one of these Class 1 optional benefits. An improved COLA is not available in conjunction with the 1.5% at 65 formula.

Beginning the second calendar year after the year of retirement, retirement and survivor allowances will be annually adjusted on a compound basis by either 3 percent, 4 percent or 5 percent. However, the cumulative adjustment may not be greater than the cumulative change in the Consumer Price Index since the date of retirement.

Purchasing Power Protection Allowance (PPPA)

Retirement and survivor allowances are protected against inflation by PPPA. PPPA benefits are cost-of-living adjustments that are intended to maintain an individual's allowance at 80 percent of the initial allowance at retirement adjusted for inflation since retirement. The PPPA benefit will be coordinated with other cost-of-living adjustments provided under the plan.

Employee Contributions

Each employee contributes toward his or her retirement based upon the retirement formula. The standard employee contribution is as described below.

The percent contributed below the monthly compensation breakpoint is 0 percent.

The monthly compensation breakpoint is \$0 for full and supplemental formula members and \$133.33 for employees covered by the modified formula.

The percent contributed above the monthly compensation breakpoint depends upon the benefit formula, as shown in the table below.

<u>Benefit Formula</u>	<u>Percent Contributed above the Breakpoint</u>
Miscellaneous, 1.5% at 65	2%
Miscellaneous, 2% at 60	7%
Miscellaneous, 2% at 55	7%
Miscellaneous, 2.5% at 55	8%
Miscellaneous, 2.7% at 55	8%
Miscellaneous, 3% at 60	8%
Safety, 1/2 at 55	Varies by entry age
Safety, 2% at 55	7%
Safety, 2% at 50	9%
Safety, 3% at 55	9%
Safety, 3% at 50	9%

The employer may choose to “pick-up” these contributions for the employees (Employer Paid Member Contributions or EPMC). An employer may also include Employee Cost Sharing in the contract, where employees contribute an additional percentage of compensation based on any optional benefit for which a contract amendment was made on or after January 1, 1979.

Auxiliary organizations of the CSUC system may elect reduced contribution rates, in which case the offset is \$317 and the contribution rate is 6 percent if members are not covered by Social Security. If members are covered by Social Security, the offset is \$513 and the contribution rate is 5 percent.

Refund of Employee Contributions

If the member’s service with the employer ends, and if the member does not satisfy the eligibility conditions for any of the retirement benefits above, the member may elect to receive a refund of his or her employee contributions, which are credited annually with 6 percent interest.

1959 Survivor Benefit

This is a pre-retirement death benefit available only to members not covered by Social Security. Any agency joining CalPERS subsequent to 1993 was required to provide this benefit if the members were not covered by Social Security. The benefit is optional for agencies joining CalPERS prior to 1994. Levels 1, 2 and 3 are now closed. Any new agency or any agency wishing to add this benefit or increase the current level must choose the 4th or Indexed Level.

This benefit is not included in the results presented in this valuation. More information on this benefit is available on the CalPERS website at www.calpers.ca.gov.

APPENDIX C

PARTICIPANT DATA

- **SUMMARY OF VALUATION DATA**
- **ACTIVE MEMBERS**
- **TRANSFERRED AND TERMINATED MEMBERS**
- **RETIRED MEMBERS AND BENEFICIARIES**

Summary of Valuation Data

	June 30, 2011	June 30, 2012
1. Active Members		
a) Counts	552	486
b) Average Attained Age	39.31	39.46
c) Average Entry Age to Rate Plan	27.20	27.13
d) Average Years of Service	12.11	12.33
e) Average Annual Covered Pay	\$ 92,320	\$ 92,097
f) Annual Covered Payroll	50,960,671	44,759,135
g) Projected Annual Payroll for Contribution Year	55,686,101	48,909,515
h) Present Value of Future Payroll	483,841,874	413,640,791
2. Transferred Members		
a) Counts	99	152
b) Average Attained Age	40.33	39.44
c) Average Years of Service	3.01	4.84
d) Average Annual Covered Pay	\$ 83,545	\$ 83,603
3. Terminated Members		
a) Counts	101	101
b) Average Attained Age	40.13	40.69
c) Average Years of Service	2.46	3.07
d) Average Annual Covered Pay	\$ 53,739	\$ 59,185
4. Retired Members and Beneficiaries		
a) Counts	718	746
b) Average Attained Age	64.62	64.58
c) Average Annual Benefits	\$ 57,110	\$ 59,398
5. Active to Retired Ratio [(1a) / (4a)]	0.77	0.65

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

Active Members

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

Distribution of Active Members by Age and Service

Years of Service at Valuation Date							
Attained Age	0-4	5-9	10-14	15-19	20-25	25+	Total
15-24	10	0	0	0	0	0	10
25-29	25	14	1	0	0	0	40
30-34	17	58	18	0	0	0	93
35-39	7	31	40	12	0	0	90
40-44	8	28	36	44	24	0	140
45-49	0	3	14	29	39	13	98
50-54	0	1	1	7	4	1	14
55-59	0	0	0	1	0	0	1
60-64	0	0	0	0	0	0	0
65 and over	0	0	0	0	0	0	0
All Ages	67	135	110	93	67	14	486

Distribution of Average Annual Salaries by Age and Service

Years of Service at Valuation Date							
Attained Age	0-4	5-9	10-14	15-19	20-25	25+	Average
15-24	\$55,623	\$0	\$0	\$0	\$0	\$0	\$55,623
25-29	62,512	79,506	91,248	0	0	0	69,178
30-34	68,302	82,475	86,900	0	0	0	80,740
35-39	72,627	81,624	93,927	102,309	0	0	89,150
40-44	69,296	82,800	90,104	104,566	119,275	0	97,000
45-49	0	78,659	89,892	100,640	113,918	133,897	108,128
50-54	0	89,569	86,754	98,584	149,601	145,597	115,029
55-59	0	0	0	116,500	0	0	116,500
60-64	0	0	0	0	0	0	0
65 and over	0	0	0	0	0	0	0
All Ages	\$64,820	\$82,007	\$90,923	\$102,729	\$117,968	\$134,733	\$92,097

Transferred and Terminated Members

Distribution of Transfers to Other CalPERS Plans by Age and Service

Attained Age	Years of Service at Valuation Date						Total	Average Salary
	0-4	5-9	10-14	15-19	20-25	25+		
15-24	0	0	0	0	0	0	0	\$0
25-29	13	4	0	0	0	0	17	74,988
30-34	24	7	1	0	0	0	32	79,437
35-39	17	4	1	1	0	0	23	80,332
40-44	30	9	6	3	2	0	50	88,081
45-49	9	3	2	1	2	1	18	88,664
50-54	7	2	0	0	0	0	9	81,678
55-59	2	0	0	0	0	0	2	102,217
60-64	1	0	0	0	0	0	1	103,671
65 and over	0	0	0	0	0	0	0	0
All Ages	103	29	10	5	4	1	152	83,603

Distribution of Terminated Participants with Funds on Deposit by Age and Service

Attained Age	Years of Service at Valuation Date						Total	Average Salary
	0-4	5-9	10-14	15-19	20-25	25+		
15-24	0	0	0	0	0	0	0	\$0
25-29	9	0	0	0	0	0	9	62,107
30-34	18	1	0	0	0	0	19	54,309
35-39	16	0	1	0	0	0	17	51,648
40-44	20	3	2	1	0	0	26	57,083
45-49	11	2	2	1	2	0	18	74,152
50-54	8	0	0	0	0	0	8	63,516
55-59	2	0	1	0	0	0	3	37,960
60-64	0	0	0	0	0	0	0	0
65 and over	1	0	0	0	0	0	1	67,929
All Ages	85	6	6	2	2	0	101	59,185

Retired Members and Beneficiaries**Distribution of Retirees and Beneficiaries by Age and Retirement Type***

Attained Age	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 30	0	0	0	0	0	0	0
30-34	0	0	3	0	0	0	3
35-39	0	1	5	0	0	0	6
40-44	0	1	29	0	0	0	30
45-49	0	0	29	0	0	0	29
50-54	62	1	26	0	2	1	92
55-59	65	0	42	0	1	6	114
60-64	60	0	42	0	0	10	112
65-69	70	2	48	0	3	14	137
70-74	39	1	24	0	1	12	77
75-79	33	1	13	0	1	16	64
80-84	26	0	5	0	0	17	48
85 and Over	11	0	3	0	1	19	34
All Ages	366	7	269	0	9	95	746

Distribution of Average Annual Amounts for Retirees and Beneficiaries by Age and Retirement Type*

Attained Age	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Average
Under 30	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30-34	0	0	37,653	0	0	0	37,653
35-39	0	25,061	42,476	0	0	0	39,573
40-44	0	9,825	41,542	0	0	0	40,485
45-49	0	0	41,841	0	0	0	41,841
50-54	94,046	13,005	44,632	0	72,030	53,315	78,279
55-59	84,658	0	69,269	0	77,421	52,357	77,225
60-64	78,676	0	67,229	0	0	33,654	70,364
65-69	67,119	44,295	58,580	0	29,920	34,289	59,625
70-74	56,529	34,991	54,680	0	30,646	40,864	52,896
75-79	45,419	24,738	57,273	0	35,445	32,046	44,004
80-84	39,341	0	44,876	0	0	19,620	32,933
85 and Over	42,034	0	36,550	0	25,684	21,581	29,640
All Ages	\$70,878	\$28,030	\$55,166	\$0	\$44,780	\$30,850	\$59,398

Retired Members and Beneficiaries (continued)**Distribution of Retirees and Beneficiaries by Years Retired and Retirement Type***

Years Retired	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 5 Yrs	110	1	55	0	0	28	194
5-9	71	1	68	0	0	27	167
10-14	77	1	48	0	0	12	138
15-19	35	2	37	0	1	9	84
20-24	35	0	35	0	4	10	84
25-29	29	0	14	0	2	4	49
30 and Over	9	2	12	0	2	5	30
All Years	366	7	269	0	9	95	746

Distribution of Average Annual Amounts for Retirees and Beneficiaries by Years Retired and Retirement Type*

Years Retired	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Average
Under 5 Yrs	\$92,300	\$25,061	\$63,962	\$0	\$0	\$36,689	\$75,893
5-9	77,008	9,825	68,594	0	0	33,004	66,065
10-14	68,285	70,744	56,488	0	0	20,821	60,072
15-19	49,079	23,998	43,049	0	76,983	34,479	44,594
20-24	51,167	0	44,575	0	51,996	24,200	45,249
25-29	40,361	0	37,270	0	30,861	24,309	37,780
30 and Over	42,624	21,292	22,591	0	28,165	22,589	28,886
All Years	\$70,878	\$28,030	\$55,166	\$0	\$44,780	\$30,850	\$59,398

* Counts of members do not include alternate payees receiving benefits while the member is still working. Therefore, the total counts may not match information on page 25 of the report. Multiple records may exist for those who have service in more than one coverage group. This does not result in double counting of liabilities.

APPENDIX D

GLOSSARY OF ACTUARIAL TERMS

Glossary of Actuarial Terms

Accrued Liability *(also called Actuarial Accrued Liability or Entry Age Normal Accrued Liability)*

The total dollars needed as of the valuation date to fund all benefits earned in the past for *current* members.

Actuarial Assumptions

Assumptions made about certain events that will affect pension costs. Assumptions generally can be broken down into two categories: demographic and economic. Demographic assumptions include such things as mortality, disability and retirement rates. Economic assumptions include discount rate, salary growth and inflation.

Actuarial Methods

Procedures employed by actuaries to achieve certain funding goals of a pension plan. Actuarial methods include funding method, setting the length of time to fund the Accrued Liability and determining the Actuarial Value of Assets.

Actuarial Valuation

The determination, as of a valuation date, of the Normal Cost, Accrued liability, Actuarial Value of Assets and related actuarial present values for a pension plan. These valuations are performed annually or when an employer is contemplating a change to their plan provisions.

Actuarial Value of Assets

The Actuarial Value of Assets used for funding purposes is obtained through an asset smoothing technique where investment gains and losses are partially recognized in the year they are incurred, with the remainder recognized in subsequent years.

This method helps to dampen large fluctuations in the employer contribution rate.

Amortization Bases

Separate payment schedules for different portions of the Unfunded Liability. The total Unfunded Liability of a Risk Pool or non-pooled plan can be segregated by "cause," creating "bases" and each such base will be separately amortized and paid for over a specific period of time. However, all bases are amortized using investment and payroll assumptions from the current valuation. This can be likened to a home having a first mortgage of 24 years remaining payments and a second mortgage that has 10 years remaining payments. Each base or each mortgage note has its own terms (payment period, principal, etc.)

Generally, in an actuarial valuation, the separate bases consist of changes in unfunded liability due to contract amendments, actuarial assumption changes, actuarial methodology changes, and or gains and losses. Payment periods are determined by Board policy and vary based on the cause of the change.

Amortization Period

The number of years required to pay off an Amortization Base.

Annual Required Contributions (ARC)

The employer's periodic required annual contributions to a defined benefit pension plan as set forth in GASB Statement No. 27, calculated in accordance with the plan assumptions. The ARC is determined by multiplying the employer contribution rate by the payroll reported to CalPERS for the applicable fiscal year. However, if this contribution is fully prepaid in a lump sum, then the dollar value of the ARC is equal to the Lump Sum Prepayment.

Classic Member (under PEPPRA)

A classic member is a member who joined CalPERS prior to January, 1, 2013 and who is not defined as a new member under PEPPRA. (See definition of new member below)

Discount Rate Assumption

The actuarial assumption that was called "investment return" in earlier CalPERS reports or "actuarial interest rate" in Section 20014 of the California Public Employees' Retirement Law (PERL).

Entry Age

The earliest age at which a plan member begins to accrue benefits under a defined benefit pension plan. In most cases, this is the age of the member on their date of hire.

Entry Age Normal Cost Method

An actuarial cost method designed to fund a member's total plan benefit over the course of his or her career. This method is designed to yield a rate expressed as a level percentage of payroll. (The assumed retirement age less the entry age is the amount of time required to fund a member's total benefit. Generally, the older a member on the date of hire, the greater the entry age normal cost. This is mainly because there is less time to earn investment income to fund the future benefits.)

Fresh Start

A Fresh Start is when multiple amortization bases are collapsed to one base and amortized together over a new funding period.

Funded Status

A measure of how well funded, or how "on track" a plan or risk pool is with respect to assets versus accrued liabilities. A ratio greater than 100% means the plan or risk pool has more assets than liabilities and a ratio less than 100% means liabilities are greater than assets. A funded ratio based on the Actuarial Value of Assets indicates the progress toward fully funding the plan using the actuarial cost methods and assumptions. A funded ratio based on the Market Value of Assets indicates the short-term solvency of the plan.

GASB 27

Statement No. 27 of the Governmental Accounting Standards Board. The accounting standard governing a state or local governmental employer's accounting for pensions.

GASB 68

Statement No. 68 of the Governmental Accounting Standards Board. The accounting standard governing a state or local governmental employer's accounting and financial reporting for pensions. GASB 68 replaces GASB 27 effective the first fiscal year beginning after June 15, 2014.

New Member (under PEPRA)

A new member includes an individual who becomes a member of a public retirement system for the first time on or after January 1, 2013, and who was not a member of another public retirement system prior to that date, and who is not subject to reciprocity with another public retirement system.

Normal Cost

The annual cost of service accrual for the upcoming fiscal year for active employees. The normal cost should be viewed as the long term contribution rate.

Pension Actuary

A business professional that is authorized by the Society of Actuaries, and the American Academy of Actuaries to perform the calculations necessary to properly fund a pension plan.

PEPRA

The California **P**ublic **E**mployees' **P**ension **R**eform **A**ct of 2013

Prepayment Contribution

A payment made by the employer to reduce or eliminate the year's required employer contribution.

Present Value of Benefits (PVB)

The total dollars needed as of the valuation date to fund all benefits earned in the past or expected to be earned in the future for *current* members.

Rolling Amortization Period

An amortization period that remains the same each year, rather than declining.

Superfunded

A condition existing when a plan's Actuarial Value of Assets exceeds its Present Value of Benefits. Prior to the passage of PEPR, when this condition existed on a given valuation date for a given plan, employee contributions for the rate year covered by that valuation could be waived.

Unfunded Liability

When a plan or pool's Actuarial Value of Assets is less than its Accrued Liability, the difference is the plan or pool's Unfunded Liability. If the Unfunded Liability is positive, the plan or pool will have to pay contributions exceeding the Normal Cost.

EXHIBIT 11



California Public Employees' Retirement System
 Actuarial Office
 P.O. Box 942701
 Sacramento, CA 94229-2701
 TTY: (916) 795-3240
 (888) 225-7377 phone • (916) 795-2744 fax
www.calpers.ca.gov

October 2013

**MISCELLANEOUS PLAN OF THE CITY OF STOCKTON (CalPERS ID: 6373973665)
 Annual Valuation Report as of June 30, 2012**

Dear Employer,

As an attachment to this letter, you will find a copy of the June 30, 2012 actuarial valuation report of your pension plan. Your 2012 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your CalPERS staff actuary, whose signature appears in the Actuarial Certification Section on page 1, is available to discuss the report with you after October 31, 2013.

Future Contribution Rates

The exhibit below displays the Minimum Employer Contribution Rate for fiscal year 2014-15 and a projected contribution rate for 2015-16, before any cost sharing. The projected rate for 2015-16 is based on the most recent information available, including an estimate of the investment return for fiscal year 2012-13, namely 12 percent, and the impact of the new smoothing methods adopted by the CalPERS Board in April 2013 that will impact employer rates for the first time in fiscal year 2015-16. For a projection of employer rates beyond 2015-16, please refer to the "Analysis of Future Investment Return Scenarios" in the "Risk Analysis" section, which includes rate projections through 2019-20 under a variety of investment return scenarios. Please disregard any projections that we may have provided you in the past.

Fiscal Year	Employer Contribution Rate
2014-15	20.090%
2015-16	22.2% (projected)

Member contributions other than cost sharing, (whether paid by the employer or the employee) are in addition to the above rates. **The employer contribution rates in this report do not reflect any cost sharing arrangement you may have with your employees.**

The estimate for 2015-16 also assumes that there are no future contract amendments and no liability gains or losses (such as larger than expected pay increases, more retirements than expected, etc.). This is a very important assumption because these gains and losses do occur and can have a significant impact on your contribution rate. Even for the largest plans, such gains and losses often cause a change in the employer's contribution rate of one or two percent of payroll and may be even larger in some less common instances. These gains and losses cannot be predicted in advance so the projected employer contribution rates are just estimates. Your actual rate for 2015-16 will be provided in next year's report.

MISCELLANEOUS PLAN OF THE CITY OF STOCKTON
(CalPERS ID: 6373973665)
Annual Valuation Report as of June 30, 2012
Page 2

Changes since the Prior Year's Valuation

On January 1, 2013, the Public Employees' Pension Reform Act of 2013 (PEPRA) took effect. The impact of most of the PEPRA changes will first show up in the rates and the benefit provision listings of the June 30, 2013 valuation for the 2015-16 rates. For more information on PEPRA, please refer to the CalPERS website.

On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and rate smoothing policies. Beginning with the June 30, 2013 valuations that set the 2015-16 rates, CalPERS will no longer use an actuarial value of assets and will employ an amortization and smoothing policy that will pay for all gains and losses over a fixed 30-year period with the increases or decreases in the rate spread directly over a 5-year period. The impact of this new actuarial methodology is reflected in the "Analysis of Future Investment Return Scenarios" subsection of the "Risk Analysis" section of your report.

A review of the preferred asset allocation mix for CalPERS investment portfolio will be performed in late 2013, which could influence future discount rates. In addition, CalPERS will review economic and demographic assumptions, including mortality rate improvements that are likely to increase employer contribution rates in future years. The "Analysis of Future Investment Return Scenarios" subsection does **not** reflect the impact of assumption changes that we expect will also impact future rates.

Besides the above noted changes, there may also be changes specific to your plan such as contract amendments and funding changes.

Further descriptions of general changes are included in the "Highlights and Executive Summary" section and in Appendix A, "Actuarial Methods and Assumptions." The effect of the changes on your rate is included in the "Reconciliation of Required Employer Contributions."

We understand that you might have a number of questions about these results. While we are very interested in discussing these results with your agency, in the interest of allowing us to give every public agency their results, we ask that you wait until after October 31 to contact us with actuarial questions. If you have other questions, you may call the Customer Contact Center at (888)-CalPERS or **(888-225-7377)**.

Sincerely,



ALAN MILLIGAN
Chief Actuary



ACTUARIAL VALUATION

as of June 30, 2012

**for the
MISCELLANEOUS PLAN
of the
CITY OF STOCKTON**

(CalPERS ID: 6373973665)

**REQUIRED CONTRIBUTIONS
FOR FISCAL YEAR
July 1, 2014 – June 30, 2015**

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CALPERS ACTUARIAL VALUATION - June 30, 2012
MISCELLANEOUS PLAN OF THE CITY OF STOCKTON
CalPERS ID: 6373973665

ACTUARIAL CERTIFICATION

To the best of our knowledge, this report is complete and accurate and contains sufficient information to disclose, fully and fairly, the funded condition of the MISCELLANEOUS PLAN OF THE CITY OF STOCKTON. This valuation is based on the member and financial data as of June 30, 2012 provided by the various CalPERS databases and the benefits under this plan with CalPERS as of the date this report was produced. It is our opinion that the valuation has been performed in accordance with generally accepted actuarial principles, in accordance with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for this plan, as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

The undersigned is an actuary for CalPERS, who is a member of the American Academy of Actuaries and the Society of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



KELLY STURM, ASA, MAAA
Senior Pension Actuary, CalPERS

HIGHLIGHTS AND EXECUTIVE SUMMARY

- **INTRODUCTION**
- **PURPOSE OF THE REPORT**
- **REQUIRED EMPLOYER CONTRIBUTION**
- **PLAN'S FUNDED STATUS**
- **COST**
- **CHANGES SINCE THE PRIOR YEAR'S VALUATION**
- **SUBSEQUENT EVENTS**

Introduction

This report presents the results of the June 30, 2012 actuarial valuation of the MISCELLANEOUS PLAN OF THE CITY OF STOCKTON of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the fiscal year 2014-15 required employer contribution rates.

On January 1, 2013, the Public Employees' Pension Reform Act of 2013 (PEPRA) took effect. The impact of most of the PEPRA changes will first show up in the rates and the benefit provision listings of the June 30, 2013 valuation, which sets the 2015-16 contribution rates. For more information on PEPRA, please refer to the CalPERS website.

On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and smoothing policies. Prior to this change, CalPERS employed an amortization and smoothing policy, which spread investment returns over a 15-year period while experience gains and losses were amortized over a rolling 30-year period. Effective with the June 30, 2013 valuations, CalPERS will no longer use an actuarial value of assets and will employ an amortization and smoothing policy that will spread rate increases or decreases over a 5-year period, and will amortize all experience gains and losses over a fixed 30-year period.

The new amortization and smoothing policy will be used for the first time in the June 30, 2013 actuarial valuations. These valuations will be performed in the fall of 2014 and will set employer contribution rates for the fiscal year 2015-16.

As stewards of the System, CalPERS must ensure that the pension fund is sustainable over multiple generations. Our strategic plan calls for us to take an integrated view of our assets and liabilities and to take steps designed to achieve a fully funded plan. A review of the preferred asset allocation mix for CalPERS investment portfolio will be performed in late 2013, which could influence future discount rates. In addition, CalPERS will review economic and demographic assumptions, including mortality rate improvements that are likely to increase employer contribution rates in future years.

Purpose of the Report

The actuarial valuation was prepared by the CalPERS Actuarial Office using data as of June 30, 2012. The purpose of the report is to:

- Set forth the actuarial assets and accrued liabilities of this plan as of June 30, 2012;
- Determine the required employer contribution rate for the fiscal year July 1, 2014 through June 30, 2015;
- Provide actuarial information as of June 30, 2012 to the CalPERS Board of Administration and other interested parties, and to;
- Provide pension information as of June 30, 2012 to be used in financial reports subject to Governmental Accounting Standards Board (GASB) Statement Number 27 for a Single Employer Defined Benefit Pension Plan.

California Actuarial Advisory Panel Recommendations

This report includes all the basic disclosure elements as described in the *Model Disclosure Elements for Actuarial Valuation Reports* recommended in 2011 by the California Actuarial Advisory Panel (CAAP), with the exception of including the original base amounts of the various components of the unfunded liability in the Schedule of Amortization Bases shown on page 19.

Additionally, this report includes the following "Enhanced Risk Disclosures" also recommended by the CAAP in the Model Disclosure Elements document:

- A "Deterministic Stress Test," projecting future results under different investment income scenarios
- A "Sensitivity Analysis," showing the impact on current valuation results using a 1% plus or minus change in the discount rate.

CALPERS ACTUARIAL VALUATION - June 30, 2012
 MISCELLANEOUS PLAN OF THE CITY OF STOCKTON
 CalPERS ID: 6373973665

The use of this report for any other purposes may be inappropriate. In particular, this report does not contain information applicable to alternative benefit costs. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

Required Employer Contribution

	Fiscal Year 2013-14	Fiscal Year 2014-15
Actuarially Determined Employer Contributions		
1. Contribution in Projected Dollars		
a) Total Normal Cost	\$ 10,319,364	\$ 9,534,932
b) Employee Contribution ¹	4,107,560	3,840,527
c) Employer Normal Cost [(1a) – (1b)]	6,211,804	5,694,405
d) Unfunded Contribution	4,314,437	5,327,732
e) Required Employer Contribution [(1c) + (1d)]	\$ 10,526,241	\$ 11,022,137
Projected Annual Payroll for Contribution Year	\$ 58,679,425	\$ 54,864,671
2. Contribution as a Percentage of Payroll		
a) Total Normal Cost	17.586%	17.379%
b) Employee Contribution ¹	7.000%	7.000%
c) Employer Normal Cost [(2a) – (2b)]	10.586%	10.379%
d) Unfunded Rate	7.353%	9.711%
e) Required Employer Rate [(2c) + (2d)]	17.939%	20.090%
Minimum Employer Contribution Rate²	17.939%	20.090%
Annual Lump Sum Prepayment Option ³	\$ 10,152,408	\$ 10,630,693

¹This is the percentage specified in the Public Employees Retirement Law, net of any reduction from the use of a modified formula or other factors. Employee cost sharing is not shown in this report.

²The Minimum Employer Contribution Rate under PEPR is the greater of the required employer rate or the employer normal cost.

³Payment must be received by CalPERS before the first payroll reported to CalPERS of the new fiscal year and after June 30. If there is contractual cost sharing or other change, this amount will change.

Plan's Funded Status

	June 30, 2011	June 30, 2012
1. Present Value of Projected Benefits	\$ 639,969,106	\$ 652,666,337
2. Entry Age Normal Accrued Liability	568,852,600	584,540,872
3. Actuarial Value of Assets (AVA)	513,963,229	517,244,333
4. Unfunded Liability (AVA Basis) [(2) – (3)]	\$ 54,889,371	\$ 67,296,539
5. Funded Ratio (AVA Basis) [(3) / (2)]	90.4%	88.5%
6. Market Value of Assets (MVA)	\$ 450,853,223	\$ 431,187,495
7. Unfunded Liability (MVA Basis) [(2) – (6)]	\$ 117,999,377	\$ 153,353,377
8. Funded Ratio (MVA Basis) [(6) / (2)]	79.3%	73.8%
Superfunded Status	No	No

Cost

Actuarial Cost Estimates in General

What will this pension plan cost? Unfortunately, there is no simple answer. There are two major reasons for the complexity of the answer. First, actuarial calculations, including the ones in this report, are based on a number of assumptions about the future. These assumptions can be divided into two categories.

- Demographic assumptions include the percentage of employees that will terminate, die, become disabled, and retire in each future year.
- Economic assumptions include future salary increases for each active employee, and the assumption with the greatest impact, future asset returns at CalPERS for each year into the future until the last dollar is paid to current members of your plan.

While CalPERS has set these assumptions to reflect our best estimate of the real future of your plan, it must be understood that these assumptions are very long-term predictors and will surely not be realized in any one year. For example, while the asset earnings at CalPERS have averaged more than the assumed return of 7.5 percent for the past twenty year period ending June 30, 2013, returns for each fiscal year ranged from negative -24 percent to +21.7 percent.

Second, the very nature of actuarial funding produces the answer to the question of plan cost as the sum of two separate pieces.

- The Normal Cost (i.e., the future annual premiums in the absence of surplus or unfunded liability) expressed as a percentage of total active payroll.
- The Past Service Cost or Accrued Liability (i.e., the current value of the benefit for all credited past service of current members) which is expressed as a lump sum dollar amount.

The cost is the sum of a percent of future pay and a lump sum dollar amount (the sum of an apple and an orange if you will). To communicate the total cost, either the Normal Cost (i.e., future percent of payroll) must be converted to a lump sum dollar amount (in which case the total cost is the present value of benefits), or the Past Service Cost (i.e., the lump sum) must be converted to a percent of payroll (in which case the total cost is expressed as the employer's rate, part of which is permanent and part temporary). Converting the Past Service Cost lump sum to a percent of payroll requires a specific amortization period, and the employer rate will vary depending on the amortization period chosen.

Changes since the Prior Year's Valuation

Benefits

The standard actuarial practice at CalPERS is to recognize mandated legislative benefit changes in the first annual valuation following the effective date of the legislation. Voluntary benefit changes by plan amendment are generally included in the first valuation that is prepared after the amendment becomes effective even if the valuation date is prior to the effective date of the amendment.

This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to Appendix B for a summary of the plan provisions used in this valuation. The effect of any mandated benefit changes or plan amendments on the unfunded liability is shown in the "(Gain)/Loss Analysis" and the effect on your employer contribution rate is shown in the "Reconciliation of Required Employer Contributions." It should be noted that no change in liability or rate is shown for any plan changes, which were already included in the prior year's valuation.

Public Employees' Pension Reform Act of 2013 (PEPRA)

On January 1, 2013, the Public Employees' Pension Reform Act of 2013 (PEPRA) took effect, requiring that a public employer's contribution to a defined benefit plan, in combination with employee contributions to that defined benefit plan, shall not be less than the normal cost rate. Beginning July 1, 2013, this means that some plans with surplus will be paying more than they otherwise would. For more information on PEPRA, please refer to the CalPERS website.

Subsequent Events

Actuarial Methods and Assumptions

On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and smoothing policies. Beginning with the June 30, 2013 valuations that set the 2015-16 rates, CalPERS will no longer use an actuarial value of assets and will employ an amortization and rate smoothing policy that will pay for all gains and losses over a fixed 30-year period with the increases or decreases in the rate spread directly over a 5-year period. The impact of this new actuarial methodology is reflected in the "Expected Rate Increases" subsection of the "Risk analysis" section of your report.

Not reflected in the "Expected Rate Increases" subsection of the "Risk analysis" section is the impact of assumption changes that we expect will also, impact future rates. A review of the preferred asset allocation mix for CalPERS investment portfolio will be performed in late 2013, which could influence future discount rates. In addition, CalPERS will review economic and demographic assumptions, including mortality rate improvements that are likely to increase employer contribution rates in future years.

Bankruptcy

On June 28, 2012, the City of Stockton filed a petition for Chapter 9 bankruptcy protection with the United States Bankruptcy Court. That petition was approved by the Judge on April 1, 2013. The bankruptcy did not have an impact on the valuation or the determination of the required contributions for the 2014-15 fiscal year.

ASSETS

- **RECONCILIATION OF THE MARKET VALUE OF ASSETS**
- **DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS**
- **ASSET ALLOCATION**
- **CALPERS HISTORY OF INVESTMENT RETURNS**

CALPERS ACTUARIAL VALUATION - June 30, 2012
 MISCELLANEOUS PLAN OF THE CITY OF STOCKTON
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Reconciliation of the Market Value of Assets

1.	Market Value of Assets as of 6/30/11 Including Receivables	\$	450,853,223
2.	Receivables for Service Buybacks as of 6/30/11		367,537
3.	Market Value of Assets as of 6/30/11		450,485,686
4.	Employer Contributions		8,203,945
5.	Employee Contributions		3,554,463
6.	Benefit Payments to Retirees and Beneficiaries		(30,219,557)
7.	Refunds		(188,037)
8.	Lump Sum Payments		0
9.	Transfers and Miscellaneous Adjustments		(565,132)
10.	Investment Return		(987,180)
11.	Market Value of Assets as of 6/30/12	\$	430,284,188
12.	Receivables for Service Buybacks as of 6/30/12		903,307
13.	Market Value of Assets as of 6/30/12 Including Receivables	\$	431,187,495

Development of the Actuarial Value of Assets

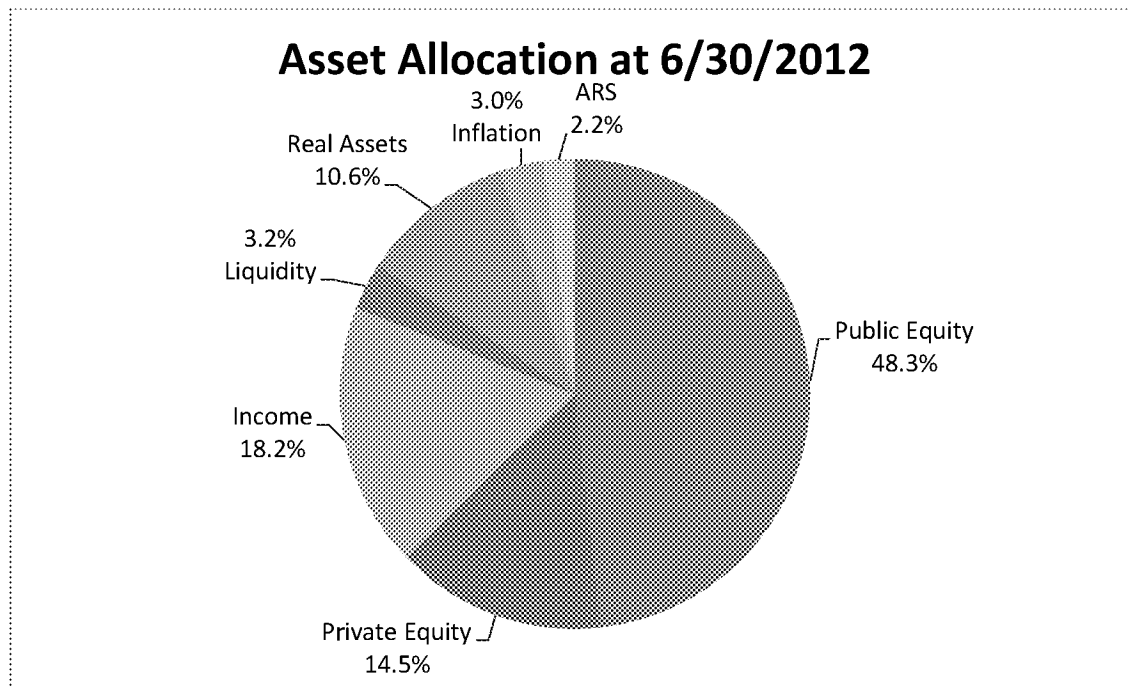
1.	Actuarial Value of Assets as of 6/30/11 Used For Rate Setting Purposes	\$	513,963,229
2.	Receivables for Service Buybacks as of 6/30/11		367,537
3.	Actuarial Value of Assets as of 6/30/11		513,595,692
4.	Employer Contributions		8,203,945
5.	Employee Contributions		3,554,463
6.	Benefit Payments to Retirees and Beneficiaries		(30,219,557)
7.	Refunds		(188,037)
8.	Lump Sum Payments		0
9.	Transfers and Miscellaneous Adjustments		(565,132)
10.	Expected Investment Income at 7.5%		37,812,166
11.	Expected Actuarial Value of Assets	\$	532,193,540
12.	Market Value of Assets as of 6/30/12	\$	430,284,188
13.	Preliminary Actuarial Value of Assets $[(11) + ((12) - (11)) / 15]$		525,399,583
14.	Maximum Actuarial Value of Assets (120% of (12))		516,341,026
15.	Minimum Actuarial Value of Assets (80% of (12))		344,227,350
16.	Actuarial Value of Assets {Lesser of [(14), Greater of ((13), (15))]}		516,341,026
17.	Actuarial Value to Market Value Ratio		120.0%
18.	Receivables for Service Buybacks as of 6/30/12		903,307
19.	Actuarial Value of Assets as of 6/30/12 Used for Rate Setting Purposes	\$	517,244,333

Asset Allocation

CalPERS adheres to an Asset Allocation Strategy which establishes asset class allocation policy targets and ranges, and manages those asset class allocations within their policy ranges. CalPERS recognizes that over 90 percent of the variation in investment returns of a well-diversified pool of assets can typically be attributed to asset allocation decisions. In December 2010 the Board approved the policy asset class targets and ranges listed below. These policy asset allocation targets and ranges are expressed as a percentage of total assets and were expected to be implemented over a period of one to two years beginning July 1, 2011 and reviewed again in December 2013.

The asset allocation and market value of assets shown below reflect the values of the Public Employees Retirement Fund (PERF) in its entirety as of June 30, 2012. The assets for CITY OF STOCKTON MISCELLANEOUS PLAN are part of the Public Employees Retirement Fund (PERF) and are invested accordingly.

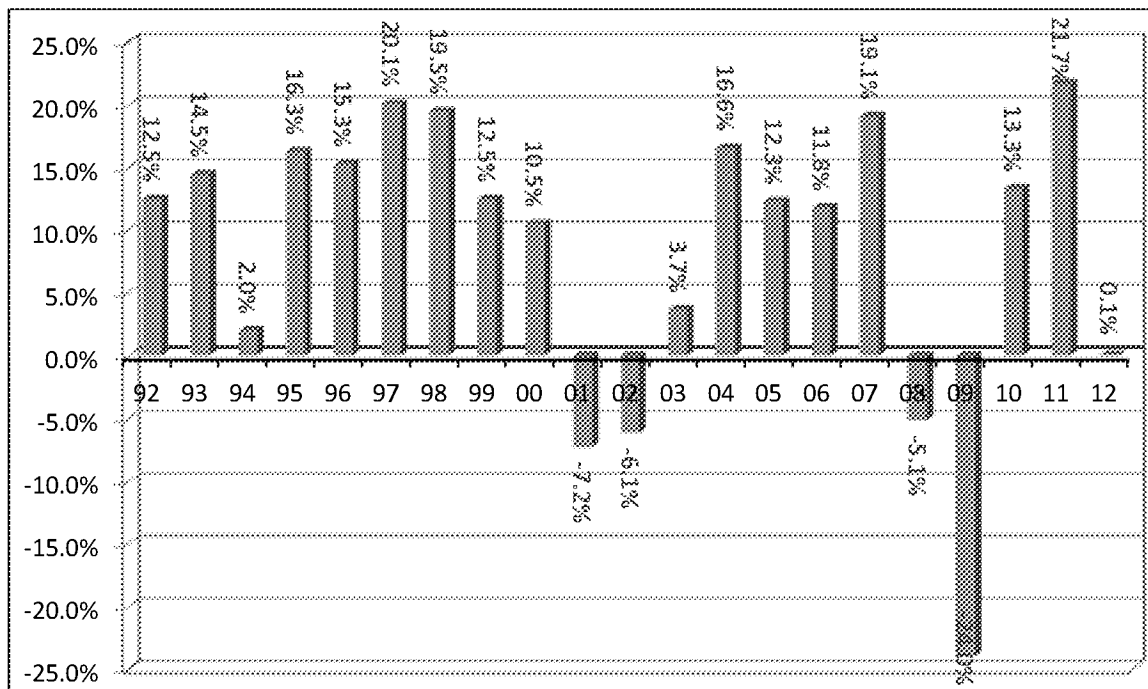
(A) Asset Class	(B) Market Value (\$ Billion)	(C) Policy Target Allocation	(D) Policy Target Range
1) Public Equity	113.0	50.0%	+/- 7%
2) Private Equity	33.9	14.0%	+/- 4%
3) Fixed Income	42.6	17.0%	+/- 5%
4) Cash Equivalents	7.5	4.0%	+/- 5%
5) Real Assets	24.8	11.0%	+/- 3%
6) Inflation Assets	7.0	4.0%	+/- 3%
7) Absolute Return Strategy (ARS)	5.1	0.0%	N/A
Total Fund	\$233.9	100.0%	N/A



CALPERS ACTUARIAL VALUATION - June 30, 2012
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CalPERS History of Investment Returns

The following is a chart with historical annual returns of the Public Employees Retirement Fund for each fiscal year ending on June 30. Beginning in 2002, the figures are reported as gross of fees.



LIABILITIES AND RATES

- **DEVELOPMENT OF ACCRUED AND UNFUNDED LIABILITIES**
- **(GAIN) / LOSS ANALYSIS 06/30/11 - 06/30/12**
- **SCHEDULE OF AMORTIZATION BASES**
- **RECONCILIATION OF REQUIRED EMPLOYER CONTRIBUTIONS**
- **EMPLOYER CONTRIBUTION RATE HISTORY**
- **FUNDING HISTORY**

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Development of Accrued and Unfunded Liabilities

1.	Present Value of Projected Benefits		
	a) Active Members	\$	221,184,776
	b) Transferred Members		22,083,865
	c) Terminated Members		9,760,119
	d) Members and Beneficiaries Receiving Payments		399,637,577
	e) Total	\$	652,666,337
2.	Present Value of Future Employer Normal Costs	\$	39,662,466
3.	Present Value of Future Employee Contributions	\$	28,462,999
4.	Entry Age Normal Accrued Liability		
	a) Active Members [(1a) - (2) - (3)]	\$	153,059,311
	b) Transferred Members (1b)		22,083,865
	c) Terminated Members (1c)		9,760,119
	d) Members and Beneficiaries Receiving Payments (1d)		399,637,577
	e) Total	\$	584,540,872
5.	Actuarial Value of Assets (AVA)	\$	517,244,333
6.	Unfunded Accrued Liability (AVA Basis) [(4e) - (5)]	\$	67,296,539
7.	Funded Ratio (AVA Basis) [(5) / (4e)]		88.5%
8.	Market Value of Assets (MVA)	\$	431,187,495
9.	Unfunded Liability (MVA Basis) [(4e) - (8)]	\$	153,353,377
10.	Funded Ratio (MVA Basis) [(8) / (4e)]		73.8%

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(Gain) /Loss Analysis 6/30/11 – 6/30/12

To calculate the cost requirements of the plan, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is compared to the expected experience based on the actuarial assumptions. This results in actuarial gains or losses, as shown below.

A Total (Gain)/Loss for the Year

1.	Unfunded Accrued Liability (UAL) as of 6/30/11	\$	54,889,371
2.	Expected Payment on the UAL during 2011/2012		3,515,013
3.	Interest through 6/30/12 $[(.075 \times (A1) - ((1.075)^{1/2} - 1) \times (A2))]$		3,987,273
4.	Expected UAL before all other changes $[(A1) - (A2) + (A3)]$		55,361,631
5.	Change due to plan changes		0
6.	Change due to assumption change		0
7.	Expected UAL after all other changes $[(A4) + (A5) + (A6)]$		55,361,631
8.	Actual UAL as of 6/30/12		67,296,539
9.	Total (Gain)/Loss for 2011/2012 $[(A8) - (A7)]$	\$	11,934,908

B Contribution (Gain)/Loss for the Year

1.	Expected Contribution (Employer and Employee)	\$	13,242,003
2.	Interest on Expected Contributions		487,598
3.	Actual Contributions		11,758,408
4.	Interest on Actual Contributions		432,969
5.	Expected Contributions with Interest $[(B1) + (B2)]$		13,729,601
6.	Actual Contributions with Interest $[(B3) + (B4)]$		12,191,377
7.	Contribution (Gain)/Loss $[(B5) - (B6)]$	\$	1,538,224

C Asset (Gain)/Loss for the Year

1.	Actuarial Value of Assets as of 6/30/11 Including Receivables	\$	513,963,229
2.	Receivables as of 6/30/11		367,537
3.	Actuarial Value of Assets as of 6/30/11		513,595,692
4.	Contributions Received		11,758,408
5.	Benefits and Refunds Paid		(30,407,594)
6.	Transfers and miscellaneous adjustments		(565,132)
7.	Expected Int. $[(.075 \times (C3) + ((1.075)^{1/2} - 1) \times ((C4) + (C5) + (C6))]$		37,812,166
8.	Expected Assets as of 6/30/12 $[(C3) + (C4) + (C5) + (C6) + (C7)]$		532,193,540
9.	Receivables as of 6/30/12		903,307
10.	Expected Assets Including Receivables		533,096,847
11.	Actual Actuarial Value of Assets as of 6/30/12		517,244,333
12.	Asset (Gain)/Loss $[(C10) - (C11)]$	\$	15,852,514

D Liability (Gain)/Loss for the Year

1.	Total (Gain)/Loss (A9)	\$	11,934,908
2.	Contribution (Gain)/Loss (B7)		1,538,224
3.	Asset (Gain)/Loss (C12)		15,852,514
4.	Liability (Gain)/Loss $[(D1) - (D2) - (D3)]$	\$	(5,455,830)

Development of the (Gain)/Loss Balance as of 6/30/12

1.	(Gain)/Loss Balance as of 6/30/11	\$	18,819,847
2.	Payment Made on the Balance during 2011/2012		1,130,150
3.	Interest through 6/30/12 $[(.075 \times (1) - ((1.075)^{1/2} - 1) \times (2))]$		1,369,874
4.	Scheduled (Gain)/Loss Balance as of 6/30/12 $[(1) - (2) + (3)]$	\$	19,059,571
5.	(Gain)/Loss for Fiscal Year ending 6/30/12 $[(A9) \text{ above}]$		11,934,908
6.	Final (Gain)/Loss Balance as of 6/30/12 $[(4) + (5)]$	\$	30,994,479

CALPERS ACTUARIAL VALUATION - June 30, 2012
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Schedule of Amortization Bases

There is a two-year lag between the Valuation Date and the Contribution Fiscal Year.

- The assets, liabilities and funded status of the plan are measured as of the valuation date; June 30, 2012.
- The employer contribution rate determined by the valuation is for the fiscal year beginning two years after the valuation date; fiscal year 2014-15.

This two-year lag is necessary due to the amount of time needed to extract and test the membership and financial data, and due to the need to provide public agencies with their employer contribution rates well in advance of the start of the fiscal year.

The Unfunded Liability is used to determine the employer contribution and therefore must be rolled forward two years from the valuation date to the first day of the fiscal year for which the contribution is being determined. The Unfunded Liability is rolled forward each year by subtracting the expected Payment on the Unfunded Liability for the fiscal year and adjusting for interest. The Expected Payment on the Unfunded Liability for a fiscal year is equal to the Expected Employer Contribution for the fiscal year minus the Expected Normal Cost for the year. The Employer Contribution Rate for the first fiscal year is determined by the actuarial valuation two years ago and the rate for the second year is from the actuarial valuation one year ago. The Normal Cost Rate for each of the two fiscal years is assumed to be the same as the rate determined by the current valuation. All expected dollar amounts are determined by multiplying the rate by the expected payroll for the applicable fiscal year, based on payroll as of the valuation date.

Reason for Base	Date Established	Amortization Period	Balance 6/30/12	Expected Payment 2012-13	Balance 6/30/13	Expected Payment 2013-14	Balance 6/30/14	Amounts for Fiscal 2014-15	
								Scheduled Payment for 2014-15	Payment as Percent-age of Payroll
FRESH START	06/30/06	11	\$13,571,672	\$1,385,492	\$13,153,039	\$1,422,229	\$12,664,919	\$1,464,896	2.670%
ASSUMPTION CHANGE	06/30/09	17	\$12,568,357	\$983,412	\$12,491,361	\$1,009,861	\$12,381,167	\$1,040,157	1.896%
SPECIAL (GAIN)/LOSS	06/30/09	27	\$16,229,684	\$993,626	\$16,416,697	\$1,020,794	\$16,589,568	\$1,051,417	1.916%
SPECIAL (GAIN)/LOSS	06/30/10	28	\$7,362,580	\$(443,158)	\$(7,455,298)	\$(455,325)	\$(7,542,354)	\$(468,985)	(0.855%)
GOLDEN HANDSHAKE	06/30/11	19	\$4,335,945	\$0	\$4,661,141	\$351,941	\$4,645,826	\$362,500	0.661%
ASSUMPTION CHANGE	06/30/11	19	\$688,979	\$(48,994)	\$791,450	\$19,920	\$830,155	\$64,774	0.118%
SPECIAL (GAIN)/LOSS	06/30/11	29	\$(4,657,861)	\$0	\$(5,007,201)	\$(300,685)	\$(5,070,984)	\$(309,706)	(0.564%)
PAYMENT (GAIN)/LOSS	06/30/12	30	\$927,865	\$(655,144)	\$1,676,722	\$(200,720)	\$2,010,587	\$120,737	0.220%
(GAIN)/LOSS	06/30/12	30	\$30,994,478	\$1,147,289	\$32,129,529	\$1,158,945	\$33,337,624	\$2,001,942	3.649%
TOTAL			\$67,296,539	\$3,362,523	\$68,857,440	\$4,026,960	\$69,846,508	\$5,327,732	9.711%

The special (gain)/loss bases were established using the temporary modification recognized in the 2009, 2010 and 2011 annual valuations. Unlike the gain/loss occurring in previous and subsequent years, the gain/loss recognized in the 2009, 2010, and 2011 annual valuations will be amortized over fixed and declining 30-year periods so that these annual gain/losses will be fully paid off in 30 years. The gain/loss recognized in 2012 and later valuations will be combined with the gain/loss from 2008 and earlier valuations.

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Reconciliation of Required Employer Contributions

	Percentage of Projected Payroll	Estimated \$ Based on Projected Payroll
1. Contribution for 7/1/13 – 6/30/14	17.939%	\$ 10,526,241
2. Effect of changes since the prior year annual valuation		
a) Effect of unexpected changes in demographics and financial results	2.151%	1,180,225
b) Effect of plan changes	0.000%	0
c) Effect of changes in Assumptions	0.000%	0
d) Effect of change in payroll	-	(684,329)
e) Effect of elimination of amortization base	0.000%	0
f) Effect of changes due to Fresh Start	0.000%	0
g) Net effect of the changes above [Sum of (a) through (f)]	2.151%	495,896
3. Contribution for 7/1/14 – 6/30/15 [(1)+(2g)]	20.090%	11,022,137

The contribution actually paid (item 1) may be different if a prepayment of unfunded actuarial liability is made or a plan change became effective after the prior year's actuarial valuation was performed.

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Employer Contribution Rate History

The table below provides a recent history of the employer contribution rates for your plan, as determined by the annual actuarial valuation. It does not account for prepayments or benefit changes made in the middle of the year.

Required By Valuation

Fiscal Year	Employer Normal Cost	Unfunded Rate	Total Employer Contribution Rate
2010 - 2011	10.844%	3.243%	14.087%
2011 - 2012	10.546%	6.395%	16.941%
2012 - 2013	10.268%	6.613%	16.881%
2013 - 2014	10.586%	7.353%	17.939%
2014 - 2015	10.379%	9.711%	20.090%

Funding History

The Funding History below shows the recent history of the actuarial accrued liability, the market value of assets, the actuarial value of assets, funded ratios and the annual covered payroll. The Actuarial Value of Assets is used to establish funding requirements and the funded ratio on this basis represents the progress toward fully funding future benefits for current plan participants. The funded ratio based on the Market Value of Assets is an indicator of the short-term solvency of the plan.

Valuation Date	Accrued Liability	Actuarial Value of Assets (AVA)	Market Value of Assets (MVA)	Funded Ratio		Annual Covered Payroll
				AVA	MVA	
06/30/08	\$ 491,467,308	\$ 460,950,390	\$ 467,269,585	93.8%	95.1%	\$ 66,743,768
06/30/09	535,150,533	478,673,431	345,912,268	89.4%	64.6%	62,265,227
06/30/10	548,129,809	495,325,729	383,364,117	90.4%	69.9%	56,256,198
06/30/11	568,852,600	513,963,229	450,853,223	90.4%	79.3%	53,699,986
06/30/12	584,540,872	517,244,333	431,187,495	88.5%	73.8%	50,208,946

RISK ANALYSIS

- **VOLATILITY RATIOS**
- **PROJECTED RATES**
- **ANALYSIS OF FUTURE INVESTMENT RETURN SCENARIOS**
- **ANALYSIS OF DISCOUNT RATE SENSITIVITY**
- **HYPOTHETICAL TERMINATION LIABILITY**

Volatility Ratios

The actuarial calculations supplied in this communication are based on a number of assumptions about very long-term demographic and economic behavior. Unless these assumptions (terminations, deaths, disabilities, retirements, salary growth, and investment return) are exactly realized each year, there will be differences on a year-to-year basis. The year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise the employer's rates from one year to the next. Therefore, the rates will inevitably fluctuate, especially due to the ups and downs of investment returns.

Asset Volatility Ratio (AVR)

Plans that have higher asset to payroll ratios produce more volatile employer rates due to investment return. For example, a plan with an asset to payroll ratio of 8 may experience twice the contribution volatility due to investment return volatility, than a plan with an asset to payroll ratio of 4. Below we have shown your asset volatility ratio, a measure of the plan's current rate volatility. It should be noted that this ratio is a measure of the current situation. It increases over time but generally tends to stabilize as the plan matures.

Liability Volatility Ratio

Plans that have higher liability to payroll ratios produce more volatile employer rates due to investment return and changes in liability. For example, a plan with a liability to payroll ratio of 8 is expected to have twice the contribution volatility of a plan with a liability to payroll ratio of 4. The liability volatility ratio is also included in the table below. It should be noted that this ratio indicates a longer-term potential for contribution volatility and the asset volatility ratio, described above, will tend to move closer to this ratio as the plan matures.

Rate Volatility	As of June 30, 2012	
1. Market Value of Assets without Receivables	\$	430,284,188
2. Payroll		50,208,946
3. Asset Volatility Ratio (AVR = 1. / 2.)		8.6
4. Accrued Liability	\$	584,540,872
5. Liability Volatility Ratio (4. / 2.)		11.6

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Projected Rates

On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and smoothing policies. Beginning with the June 30, 2013 valuations that will set the 2015-16 rates, CalPERS will employ an amortization and rate smoothing policy that will pay for all gains and losses over a fixed 30-year period with the increases or decreases in the rate spread directly over a 5-year period. The table below shows projected employer contribution rates (before cost sharing) for the next five Fiscal Years, ***assuming CalPERS earns 12% for fiscal year 2012-13 and 7.50 percent every fiscal year thereafter, and assuming that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur between now and the beginning of the fiscal year 2015-16. Consequently, these projections do not take into account potential rate increases from likely future assumption changes.*** Nor do they take into account the positive impact PEPPRA is expected to gradually have on the normal cost.

	New Rate	Projected Future Employer Contribution Rates				
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Contribution Rates:	20.090%	22.2%	24.3%	26.4%	28.6%	30.7%

Analysis of Future Investment Return Scenarios

In July 2013, the investment return for fiscal year 2012-13 was announced to be 12.5 percent. Note that this return is before administrative expenses and also does not reflect final investment return information for real estate and private equities. The final return information for these two asset classes is expected to be available later in October. For purposes of projecting future employer rates, we are assuming a 12 percent investment return for fiscal year 2012-13.

The investment return realized during a fiscal year first affects the contribution rate for the fiscal year 2 years later. Specifically, the investment return for 2012-13 will first be reflected in the June 30, 2013 actuarial valuation that will be used to set the 2015-16 employer contribution rates, the 2013-14 investment return will first be reflected in the June 30, 2014 actuarial valuation that will be used to set the 2016-17 employer contribution rates and so forth.

Based on a 12 percent investment return for fiscal year 2012-13 **and the April 17, 2013 CalPERS Board-approved amortization and rate smoothing method change**, and assuming that all other actuarial assumptions will be realized, and that no further changes to assumptions, contributions, benefits, or funding will occur between now and the beginning of the fiscal year 2015-16, the effect on the 2015-16 Employer Rate is as follows: (Note that this estimated rate does not reflect additional assumption changes as discussed in the "Subsequent Events" section.)

Estimated 2015-16 Employer Rate

22.2%

Estimated Increase in Employer Rate between 2014-15 and 2015-16

2.1%

As part of this report, a sensitivity analysis was performed to determine the effects of various investment returns during fiscal years 2013-14, 2014-15 and 2015-16 on the 2016-17, 2017-18 and 2018-19 employer rates. Once again, the projected rate increases assume that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur.

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Five different investment return scenarios were selected.

- The first scenario is what one would expect if the markets were to give us a 5th percentile return from July 1, 2013 through June 30, 2016. The 5th percentile return corresponds to a -4.1 percent return for each of the 2013-14, 2014-15 and 2015-16 fiscal years.
- The second scenario is what one would expect if the markets were to give us a 25th percentile return from July 1, 2013 through June 30, 2016. The 25th percentile return corresponds to a 2.6 percent return for each of the 2013-14, 2014-15 and 2015-16 fiscal years.
- The third scenario assumed the return for 2013-14, 2014-15, 2015-16 would be our assumed 7.5 percent investment return which represents about a 49th percentile event.
- The fourth scenario is what one would expect if the markets were to give us a 75th percentile return from July 1, 2013 through June 30, 2016. The 75th percentile return corresponds to a 11.9 percent return for each of the 2013-14, 2014-15 and 2015-16 fiscal years.
- Finally, the last scenario is what one would expect if the markets were to give us a 95th percentile return from July 1, 2013 through June 30, 2016. The 95th percentile return corresponds to a 18.5 percent return for each of the 2013-14, 2014-15 and 2015-16 fiscal years.

The table below shows the estimated projected contribution rates and the estimated increases for your plan under the five different scenarios.

2013-16 Investment Return Scenario	Estimated Employer Rate			Estimated Change in Employer Rate between 2015-16 and 2018-19
	2016-17	2017-18	2018-19	
-4.1% (5th percentile)	25.8%	30.7%	36.7%	14.5%
2.6% (25th percentile)	24.9%	28.3%	32.2%	10.0%
7.5%	24.3%	26.4%	28.6%	6.4%
11.9%(75th percentile)	23.8%	24.7%	25.1%	2.9%
18.5%(95th percentile)	22.9%	22.1%	19.6%	-2.6%

Analysis of Discount Rate Sensitivity

The following analysis looks at the 2014-15 employer contribution rates under two different discount rate scenarios. Shown below are the employer contribution rates assuming discount rates that are 1 percent lower and 1 percent higher than the current valuation discount rate. This analysis gives an indication of the potential required employer contribution rates if the PERF were to realize investment returns of 6.50 percent or 8.50 percent over the long-term.

This type of analysis gives the reader a sense of the long-term risk to the employer contribution rates.

2014-15 Employer Contribution Rate			
As of June 30, 2012	6.50% Discount Rate (-1%)	7.50% Discount Rate (assumed rate)	8.50% Discount Rate (+1%)
Employer Normal Cost	14.717%	10.379%	7.086%
Unfunded Rate Payment	20.180%	9.711%	(0.744%)
Total	34.897%	20.090%	6.342%

CALPERS ACTUARIAL VALUATION - June 30, 2012
 MISCELLANEOUS PLAN OF THE CITY OF STOCKTON
 CalPERS ID: 6373973665

Hypothetical Termination Liability

Below is an estimate of the financial position of your plan if you had terminated your contract with CalPERS as of June 30, 2012 using the discount rates shown below. Your plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. In December 2012, the CalPERS Board adopted a more conservative investment policy and asset allocation strategy for the Terminated Agency Pool. Since the Terminated Agency Pool has limited funding sources, expected benefit payments are secured by risk-free assets. With this change, CalPERS increased benefit security for members while limiting its funding risk. This asset allocation has a lower expected rate of return than the PERF. Consequently, the lower discount rate for the Terminated Agency pool results in higher liabilities for terminated plans.

In order to terminate your plan, you must first contact our Retirement Services Contract Unit to initiate a Resolution of Intent to Terminate. The completed Resolution will allow your plan actuary to give you a preliminary termination valuation with a more up-to-date estimate of your plan liabilities. CalPERS advises you to consult with your plan actuary before beginning this process.

Valuation Date		Hypothetical Termination Liability ¹	Market Value of Assets (MVA)	Unfunded Termination Liability	Termination Funded Ratio	Termination Liability Discount Rate ²
06/30/11	\$	808,560,358	\$ 450,853,223	\$ 357,707,135	55.8%	4.82%
06/30/12		0	431,187,495	575,931,065	42.8%	2.98%

¹ The hypothetical liabilities calculated above include a 7 percent mortality contingency load in accordance with Board policy. Other actuarial assumptions, such as wage and inflation assumptions, can be found in appendix A.

² The discount rate assumption used for termination valuations is a weighted average of the 10 and 30-year US Treasury yields in effect on the valuation date that equal the duration of the pension liabilities. For purposes of this hypothetical termination liability estimate, the discount rate used, 2.98 percent, is the yield on the 30-year US Treasury Separate Trading of Registered Interest and Principal of Securities (STRIPS) as of June 30, 2012. In last year's report the May 2012 rate of 2.87 percent was inadvertently shown rather than the June rate of 2.98 percent. Please note, as of June 30, 2013 the 30-year STRIPS yield was 3.72 percent.

GASB STATEMENT NO. 27

MISCELLANEOUS PLAN of the CITY OF STOCKTON**Information for Compliance with GASB Statement No. 27**

Disclosure under GASB 27 follows. However, note that effective for financial statements for fiscal years beginning after June 15, 2014, GASB 68 replaces GASB 27. GASB 68 will require additional reporting. CalPERS is planning to provide GASB 68 disclosure information upon request for an additional fee. We urge you to start discussions with your auditors on how to implement GASB 68.

Under GASB 27, an employer reports an annual pension cost (APC) equal to the annual required contribution (ARC) plus an adjustment for the cumulative difference between the APC and the employer's actual plan contributions for the year. The cumulative difference is called the net pension obligation (NPO). The ARC for the period July 1, 2014 to June 30, 2015 has been determined by an actuarial valuation of the plan as of June 30, 2012. The unadjusted GASB compliant contribution rate for the indicated period is 20.090 percent of payroll. In order to calculate the dollar value of the ARC for inclusion in financial statements prepared as of June 30, 2015, this contribution rate, less any employee cost sharing, as modified by any amendments for the year, would be multiplied by the payroll of covered employees that was actually paid during the period July 1, 2014 to June 30, 2015. The employer and the employer's auditor are responsible for determining the NPO and the APC.

A summary of principal assumptions and methods used to determine the ARC is shown below.

<u>Retirement Program</u>	
Valuation Date	June 30, 2012
Actuarial Cost Method	Entry Age Normal Cost Method
Amortization Method	Level Percent of Payroll
Average Remaining Period	22 Years as of the Valuation Date
Asset Valuation Method	15 Year Smoothed Market
Actuarial Assumptions	
Discount Rate	7.50% (net of administrative expenses)
Projected Salary Increases	3.30% to 14.20% depending on Age, Service, and type of employment
Inflation	2.75%
Payroll Growth	3.00%
Individual Salary Growth	A merit scale varying by duration of employment coupled with an assumed annual inflation growth of 2.75% and an annual production growth of 0.25%.

Initial unfunded liabilities are amortized over a closed period that depends on the plan's date of entry into CalPERS. Subsequent plan amendments are amortized as a level percentage of pay over a closed 20-year period. Gains and losses that occur in the operation of the plan are amortized over a 30-year rolling period, which results in an amortization of about 6 percent of unamortized gains and losses each year. If the plan's accrued liability exceeds the actuarial value of plan assets, then the amortization payment on the total unfunded liability may not be lower than the payment calculated over a 30-year amortization period. More detailed information on assumptions and methods is provided in Appendix A of this report. Appendix B contains a description of benefits included in the valuation.

The Schedule of Funding Progress below shows the recent history of the actuarial accrued liability, actuarial value of assets, their relationship and the relationship of the unfunded actuarial accrued liability to payroll.

Valuation Date	Accrued Liability (a)	Actuarial Value of Assets (AVA) (b)	Unfunded Liability (UL) (a)-(b)	Funded Ratios		Annual Covered Payroll (c)	UL As a % of Payroll [(a)-(b)]/(c)
				(AVA) (b)/(a)	Market Value		
06/30/08	\$ 491,467,308	\$ 460,950,390	\$ 30,516,918	93.8%	95.1%	\$ 66,743,768	45.7%
06/30/09	535,150,533	478,673,431	56,477,102	89.4%	64.6%	62,265,227	90.7%
06/30/10	548,129,809	495,325,729	52,804,080	90.4%	69.9%	56,256,198	93.9%
06/30/11	568,852,600	513,963,229	54,889,371	90.4%	79.3%	53,699,986	102.2%
06/30/12	584,540,872	517,244,333	67,296,539	88.5%	73.8%	50,208,946	134.0%

PLAN'S MAJOR BENEFIT PROVISIONS

Plan's Major Benefit Options

Shown below is a summary of the major optional benefits for which your agency has contracted. A description of principal standard and optional plan provisions is in the following section of this Appendix.

Benefit Provision	Contract Package			
	Receiving	Active	Active	Receiving
Benefit Formula		2.0% @ 55	2.0% @ 55	
Social Security Coverage Full/Modified		Yes Modified	No Full	
Final Average Compensation Period		12 mos.	12 mos.	
Sick Leave Credit		Yes	Yes	
Non-Industrial Disability		Standard	Standard	
Industrial Disability		No	No	
Pre-Retirement Death Benefits		No	No	
Optional Settlement 2W		No	Level 4	
1959 Survivor Benefit Level		No	No	
Special		No	No	
Alternate (firefighters)				
Post-Retirement Death Benefits				
Lump Sum	\$500 Yes	\$500 Yes	\$500 Yes	\$500 No
Survivor Allowance (PRSA)				
COLA	5%	5%	5%	2%

APPENDICES

- **APPENDIX A – ACTUARIAL METHODS AND ASSUMPTIONS**
- **APPENDIX B – PRINCIPAL PLAN PROVISIONS**
- **APPENDIX C – SUMMARY OF PARTICIPANT DATA**
- **APPENDIX D – GLOSSARY OF ACTUARIAL TERMS**

APPENDIX A

ACTUARIAL METHODS AND ASSUMPTIONS

- **ACTUARIAL DATA**
- **ACTUARIAL METHODS**
- **ACTUARIAL ASSUMPTIONS**
- **MISCELLANEOUS**

Actuarial Data

As stated in the Actuarial Certification, the data, which serves as the basis of this valuation, has been obtained from the various CalPERS databases. We have reviewed the valuation data and believe that it is reasonable and appropriate in aggregate. We are unaware of any potential data issues that would have a material effect on the results of this valuation, except that data does not always contain the latest salary information for former members now in reciprocal systems and does not recognize the potential for unusually large salary deviation in certain cases such as elected officials. Therefore, salary information in these cases may not be accurate. These situations are relatively infrequent, however, and when they do occur, they generally do not have a material impact on the employer contribution rates.

Actuarial Methods

Funding Method

The actuarial funding method used for the Retirement Program is the Entry Age Normal Cost Method. Under this method, projected benefits are determined for all members and the associated liabilities are spread in a manner that produces level annual cost as a percent of pay in each year from the age of hire (entry age) to the assumed retirement age. The cost allocated to the current fiscal year is called the normal cost.

The actuarial accrued liability for active members is then calculated as the portion of the total cost of the plan allocated to prior years. The actuarial accrued liability for members currently receiving benefits, for active members beyond the assumed retirement age, and for members entitled to deferred benefits, is equal to the present value of the benefits expected to be paid. No normal costs are applicable for these participants.

The excess of the total actuarial accrued liability over the actuarial value of plan assets is called the unfunded actuarial accrued liability. Funding requirements are determined by adding the normal cost and an amortization of the unfunded liability as a level percentage of assumed future payrolls. All changes in liability due to plan amendments, changes in actuarial assumptions, or changes in actuarial methodology are amortized separately over a 20-year period. All new gains or losses are tracked and amortized over a rolling 30-year period. If a plan's accrued liability exceeds the actuarial value of assets, the annual contribution with respect to the total unfunded liability may not be less than the amount produced by a 30-year amortization of the unfunded liability.

Additional contributions will be required for any plan or pool if their cash flows hamper adequate funding progress by preventing the expected funded status on a market value of assets basis to either:

- Increase by at least 15% by June 30, 2043; or
- Reach a level of 75% funded by June 30, 2043

The necessary additional contribution will be obtained by changing the amortization period of the gains and losses, except for those occurring in the fiscal years 2008-2009, 2009-2010, and 2010-2011 to a period, which will result in the satisfaction of the above criteria. CalPERS actuaries will reassess the criteria above when performing each future valuation to determine whether or not additional contributions are necessary.

An exception to the funding rules above is used whenever the application of such rules results in inconsistencies. In these cases, a "fresh start" approach is used. This simply means that the current unfunded actuarial liability is projected and amortized over a set number of years. As mentioned above, if the annual contribution on the total unfunded liability was less than the amount produced by a 30-year amortization of the unfunded liability, the plan actuary would implement a 30-year fresh start. However, in the case of a 30-year fresh start, just the unfunded liability not already in the (gain)/loss base (which is already amortized over 30 years), will go into the new fresh start base. In addition, a fresh start is needed in the following situations:

- 1) When a positive payment would be required on a negative unfunded actuarial liability (or conversely a negative payment on a positive unfunded actuarial liability); or

- 2) When there are excess assets, rather than an unfunded liability. In this situation, a 30-year fresh start is used, unless a longer fresh start is needed to avoid a negative total rate.

It should be noted that the actuary may choose to use a fresh start under other circumstances. In all cases, the fresh start period is set by the actuary at what is deemed appropriate; however, the period will not be less than five years, nor greater than 30 years.

Asset Valuation Method

In order to dampen the effect of short-term market value fluctuations on employer contribution rates, the following asset smoothing technique is used. First, an Expected Value of Assets is computed by bringing forward the prior year's Actuarial Value of Assets and the contributions received and benefits paid during the year at the assumed actuarial rate of return. The Actuarial Value of Assets is then computed as the Expected Value of Assets plus one-fifteenth of the difference between the actual Market Value of Assets and the Expected Value of Assets, as of the valuation date. However, in no case will the Actuarial Value of Assets be less than 80% or greater than 120% of the actual Market Value of Assets.

In June 2009, the CalPERS Board adopted changes to the asset smoothing method in order to phase in over a three-year period the impact of the negative -24 percent investment loss experienced by CalPERS in fiscal year 2008-2009. The following changes were adopted:

- Increase the corridor limits for the actuarial value of assets from 80 percent/120 percent of market value to 60 percent/140 percent of market value on June 30, 2009
- Reduce the corridor limits for the actuarial value of assets to 70 percent/130 percent of market value on June 30, 2010
- Return to the 80 percent/120 percent of market value corridor limits for the actuarial value of assets on June 30, 2011 and thereafter

On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and rate smoothing policies. Beginning with the June 30, 2013 valuations that set the 2015-16 rates, CalPERS will employ an amortization and smoothing policy that will pay for all gains and losses over a fixed 30-year period with the increases or decreases in the rate spread directly over a 5-year period. Details of the agenda item can be found on our website CalPERS On-Line:

<http://www.calpers.ca.gov/index.jsp?bc=/about/committee-meetings/archives/pension-201304.xml>

Actuarial Assumptions

Economic Assumptions

Discount Rate

7.5% compounded annually (net of expenses). This assumption is used for all plans.

Termination Liability Discount Rate

The discount rate used for termination valuation is a weighted average of the 10 and 30-year US Treasury yields in effect on the valuation date that equal the duration of the pension liabilities. For purposes of this hypothetical termination liability estimate, the discount rate used, 2.98 percent, is the yield on the 30-year US Treasury Separate Trading of Registered Interest and Principal of Securities (STRIPS) as of June 30, 2012. Please note, as of June 30, 2013 the 30-year STRIPS yield was 3.72 percent.

Salary Growth

Annual increases vary by category, entry age, and duration of service. A sample of assumed increases are shown below.

Public Agency Miscellaneous

<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1420	0.1240	0.0980
1	0.1190	0.1050	0.0850
2	0.1010	0.0910	0.0750
3	0.0880	0.0800	0.0670
4	0.0780	0.0710	0.0610
5	0.0700	0.0650	0.0560
10	0.0480	0.0460	0.0410
15	0.0430	0.0410	0.0360
20	0.0390	0.0370	0.0330
25	0.0360	0.0360	0.0330
30	0.0360	0.0360	0.0330

Public Agency Fire

<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1050	0.1050	0.1020
1	0.0950	0.0940	0.0850
2	0.0870	0.0830	0.0700
3	0.0800	0.0750	0.0600
4	0.0740	0.0680	0.0510
5	0.0690	0.0620	0.0450
10	0.0510	0.0460	0.0350
15	0.0410	0.0390	0.0340
20	0.0370	0.0360	0.0330
25	0.0350	0.0350	0.0330
30	0.0350	0.0350	0.0330

Salary Growth (continued)

Public Agency Police			
Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)
0	0.1090	0.1090	0.1090
1	0.0930	0.0930	0.0930
2	0.0810	0.0810	0.0780
3	0.0720	0.0700	0.0640
4	0.0650	0.0610	0.0550
5	0.0590	0.0550	0.0480
10	0.0450	0.0420	0.0340
15	0.0410	0.0390	0.0330
20	0.0370	0.0360	0.0330
25	0.0350	0.0340	0.0330
30	0.0350	0.0340	0.0330

Public Agency County Peace Officers			
Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)
0	0.1290	0.1290	0.1290
1	0.1090	0.1060	0.1030
2	0.0940	0.0890	0.0840
3	0.0820	0.0770	0.0710
4	0.0730	0.0670	0.0610
5	0.0660	0.0600	0.0530
10	0.0460	0.0420	0.0380
15	0.0410	0.0380	0.0360
20	0.0370	0.0360	0.0340
25	0.0350	0.0340	0.0330
30	0.0350	0.0340	0.0330

Schools			
Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)
0	0.1080	0.0960	0.0820
1	0.0940	0.0850	0.0740
2	0.0840	0.0770	0.0670
3	0.0750	0.0700	0.0620
4	0.0690	0.0640	0.0570
5	0.0630	0.0600	0.0530
10	0.0450	0.0440	0.0410
15	0.0390	0.0380	0.0350
20	0.0360	0.0350	0.0320
25	0.0340	0.0340	0.0320
30	0.0340	0.0340	0.0320

- The Miscellaneous salary scale is used for Local Prosecutors.
- The Police salary scale is used for Other Safety, Local Sheriff, and School Police.

Overall Payroll Growth

3.00 percent compounded annually (used in projecting the payroll over which the unfunded liability is amortized). This assumption is used for all plans.

Inflation

2.75 percent compounded annually. This assumption is used for all plans.

Non-valued Potential Additional Liabilities

The potential liability loss for a cost-of-living increase exceeding the 2.75 percent inflation assumption, and any potential liability loss from future member service purchases are not reflected in the valuation.

Miscellaneous Loading Factors**Credit for Unused Sick Leave**

Total years of service is increased by 1 percent for those plans that have accepted the provision providing Credit for Unused Sick Leave.

Conversion of Employer Paid Member Contributions (EPMC)

Total years of service is increased by the Employee Contribution Rate for those plans with the provision providing for the Conversion of Employer Paid Member Contributions (EPMC) during the final compensation period.

Norris Decision (Best Factors)

Employees hired prior to July 1, 1982 have projected benefit amounts increased in order to reflect the use of "Best Factors" in the calculation of optional benefit forms. This is due to a 1983 Supreme Court decision, known as the Norris decision, which required males and females to be treated equally in the determination of benefit amounts. Consequently, anyone already employed at that time is given the best possible conversion factor when optional benefits are determined. No loading is necessary for employees hired after July 1, 1982.

Termination Liability

The termination liabilities include a 7 percent contingency load. This load is for unforeseen improvements in mortality.

Demographic Assumptions**Pre-Retirement Mortality**

Non-Industrial Death Rates vary by age and gender. Industrial Death rates vary by age. See sample rates in table below. The non-industrial death rates are used for all plans. The industrial death rates are used for Safety Plans (except for Local Prosecutor safety members where the corresponding Miscellaneous Plan does not have the Industrial Death Benefit).

Age	Non-Industrial Death (Not Job-Related)		Industrial Death (Job-Related)
	Male	Female	Male and Female
20	0.00047	0.00016	0.00003
25	0.00050	0.00026	0.00007
30	0.00053	0.00036	0.00010
35	0.00067	0.00046	0.00012
40	0.00087	0.00065	0.00013
45	0.00120	0.00093	0.00014
50	0.00176	0.00126	0.00015
55	0.00260	0.00176	0.00016
60	0.00395	0.00266	0.00017
65	0.00608	0.00419	0.00018
70	0.00914	0.00649	0.00019
75	0.01220	0.00878	0.00020
80	0.01527	0.01108	0.00021

Miscellaneous Plans usually have Industrial Death rates set to zero unless the agency has specifically contracted for Industrial Death benefits. If so, each Non-Industrial Death rate shown above will be split into two components; 99 percent will become the Non-Industrial Death rate and 1 percent will become the Industrial Death rate.

Post-Retirement Mortality

Rates vary by age, type of retirement and gender. See sample rates in table below. These rates are used for all plans.

Age	Healthy Recipients		Non-Industrially Disabled (Not Job-Related)		Industrially Disabled (Job-Related)	
	Male	Female	Male	Female	Male	Female
50	0.00239	0.00125	0.01632	0.01245	0.00443	0.00356
55	0.00474	0.00243	0.01936	0.01580	0.00563	0.00546
60	0.00720	0.00431	0.02293	0.01628	0.00777	0.00798
65	0.01069	0.00775	0.03174	0.01969	0.01388	0.01184
70	0.01675	0.01244	0.03870	0.03019	0.02236	0.01716
75	0.03080	0.02071	0.06001	0.03915	0.03585	0.02665
80	0.05270	0.03749	0.08388	0.05555	0.06926	0.04528
85	0.09775	0.07005	0.14035	0.09577	0.11799	0.08017
90	0.16747	0.12404	0.21554	0.14949	0.16575	0.13775
95	0.25659	0.21556	0.31025	0.23055	0.26108	0.23331
100	0.34551	0.31876	0.45905	0.37662	0.40918	0.35165
105	0.58527	0.56093	0.67923	0.61523	0.64127	0.60135
110	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

The mortality assumptions are based on mortality rates resulting from the most recent CalPERS Experience Study adopted by the CalPERS Board, first used in the June 30, 2009 valuation. For purposes of the post-retirement mortality rates, those revised rates include 5 years of projected on-going mortality improvement using Scale AA published by the Society of Actuaries until June 30, 2010. There is no margin for future mortality improvement beyond the valuation date. The mortality assumption will be reviewed with the next experience study expected to be completed for the June 30, 2013 valuation to determine an appropriate margin to be used.

Marital Status

For active members, a percentage who are married upon retirement is assumed according to member category as shown in the following table.

Member Category	Percent Married
Miscellaneous Member	85%
Local Police	90%
Local Fire	90%
Other Local Safety	90%
School Police	90%

Age of Spouse

It is assumed that female spouses are 3 years younger than male spouses are. This assumption is used for all plans.

Terminated Members

It is assumed that terminated members refund immediately if non-vested. Terminated members who are vested are assumed to follow the same service retirement pattern as active members but with a load to reflect the expected higher rates of retirement, especially at lower ages. The following table shows the load factors that are applied to the service retirement assumption for active members to obtain the service retirement pattern for separated vested members:

Age	Load Factor
50	450%
51	250%
52 through 56	200%
57 through 60	150%
61 through 64	125%
65 and above	100% (no change)

CALPERS ACTUARIAL VALUATION – June 30, 2012
ACTUARIAL METHODS AND ASSUMPTIONS

APPENDIX A

Termination with Refund

Rates vary by entry age and service for Miscellaneous Plans. Rates vary by service for Safety Plans.
See sample rates in tables below.

Public Agency Miscellaneous

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40	Entry Age 45
0	0.1742	0.1674	0.1606	0.1537	0.1468	0.1400
1	0.1545	0.1477	0.1409	0.1339	0.1271	0.1203
2	0.1348	0.1280	0.1212	0.1142	0.1074	0.1006
3	0.1151	0.1083	0.1015	0.0945	0.0877	0.0809
4	0.0954	0.0886	0.0818	0.0748	0.0680	0.0612
5	0.0212	0.0193	0.0174	0.0155	0.0136	0.0116
10	0.0138	0.0121	0.0104	0.0088	0.0071	0.0055
15	0.0060	0.0051	0.0042	0.0032	0.0023	0.0014
20	0.0037	0.0029	0.0021	0.0013	0.0005	0.0001
25	0.0017	0.0011	0.0005	0.0001	0.0001	0.0001
30	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001
35	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Public Agency Safety

Duration of Service	Fire	Police	County Peace Officer
0	0.0710	0.1013	0.0997
1	0.0554	0.0636	0.0782
2	0.0398	0.0271	0.0566
3	0.0242	0.0258	0.0437
4	0.0218	0.0245	0.0414
5	0.0029	0.0086	0.0145
10	0.0009	0.0053	0.0089
15	0.0006	0.0027	0.0045
20	0.0005	0.0017	0.0020
25	0.0003	0.0012	0.0009
30	0.0003	0.0009	0.0006
35	0.0003	0.0009	0.0006

The Police Termination and Refund rates are also used for Public Agency Local Prosecutors, Other Safety, Local Sheriff and School Police.

Schools

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40	Entry Age 45
0	0.1730	0.1627	0.1525	0.1422	0.1319	0.1217
1	0.1585	0.1482	0.1379	0.1277	0.1174	0.1071
2	0.1440	0.1336	0.1234	0.1131	0.1028	0.0926
3	0.1295	0.1192	0.1089	0.0987	0.0884	0.0781
4	0.1149	0.1046	0.0944	0.0841	0.0738	0.0636
5	0.0278	0.0249	0.0221	0.0192	0.0164	0.0135
10	0.0172	0.0147	0.0122	0.0098	0.0074	0.0049
15	0.0115	0.0094	0.0074	0.0053	0.0032	0.0011
20	0.0073	0.0055	0.0038	0.0020	0.0002	0.0002
25	0.0037	0.0023	0.0010	0.0002	0.0002	0.0002
30	0.0015	0.0003	0.0002	0.0002	0.0002	0.0002
35	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002

Termination with Vested Benefits

Rates vary by entry age and service for Miscellaneous Plans. Rates vary by service for Safety Plans.
See sample rates in tables below.

Public Agency Miscellaneous

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40
5	0.0656	0.0597	0.0537	0.0477	0.0418
10	0.0530	0.0466	0.0403	0.0339	0.0000
15	0.0443	0.0373	0.0305	0.0000	0.0000
20	0.0333	0.0261	0.0000	0.0000	0.0000
25	0.0212	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000

Public Agency Safety

Duration of Service	Fire	Police	County Peace Officer
5	0.0162	0.0163	0.0265
10	0.0061	0.0126	0.0204
15	0.0058	0.0082	0.0130
20	0.0053	0.0065	0.0074
25	0.0047	0.0058	0.0043
30	0.0045	0.0056	0.0030
35	0.0000	0.0000	0.0000

- When a member is eligible to retire, the termination with vested benefits probability is set to zero.
- After termination with vested benefits, a miscellaneous member is assumed to retire at age 59 and a safety member at age 54.
- The Police Termination with vested benefits rates are also used for Public Agency Local Prosecutors, Other Safety, Local Sheriff and School Police.

Schools

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40
5	0.0816	0.0733	0.0649	0.0566	0.0482
10	0.0629	0.0540	0.0450	0.0359	0.0000
15	0.0537	0.0440	0.0344	0.0000	0.0000
20	0.0420	0.0317	0.0000	0.0000	0.0000
25	0.0291	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000

Non-Industrial (Not Job-Related) Disability

Rates vary by age and gender for Miscellaneous Plans. Rates vary by age and category for Safety Plans.

Age	Miscellaneous		Fire	Police	County Peace Officer	Schools	
	Male	Female	Male and Female	Male and Female	Male and Female	Male	Female
20	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
25	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
30	0.0002	0.0002	0.0001	0.0002	0.0001	0.0002	0.0001
35	0.0006	0.0009	0.0001	0.0003	0.0004	0.0006	0.0004
40	0.0015	0.0016	0.0001	0.0004	0.0007	0.0014	0.0009
45	0.0025	0.0024	0.0002	0.0005	0.0013	0.0028	0.0017
50	0.0033	0.0031	0.0005	0.0008	0.0018	0.0044	0.0030
55	0.0037	0.0031	0.0010	0.0013	0.0010	0.0049	0.0034
60	0.0038	0.0025	0.0015	0.0020	0.0006	0.0043	0.0024

- The Miscellaneous Non-Industrial Disability rates are used for Local Prosecutors.
- The Police Non-Industrial Disability rates are also used for Other Safety, Local Sheriff and School Police.

Industrial (Job-Related) Disability

Rates vary by age and category.

Age	Fire	Police	County Peace Officer
20	0.0002	0.0007	0.0003
25	0.0012	0.0032	0.0015
30	0.0025	0.0064	0.0031
35	0.0037	0.0097	0.0046
40	0.0049	0.0129	0.0063
45	0.0061	0.0161	0.0078
50	0.0074	0.0192	0.0101
55	0.0721	0.0668	0.0173
60	0.0721	0.0668	0.0173

- The Police Industrial Disability rates are also used for Local Sheriff and Other Safety.
- Fifty Percent of the Police Industrial Disability rates are used for School Police.
- One Percent of the Police Industrial Disability rates are used for Local Prosecutors.
- Normally, rates are zero for Miscellaneous Plans unless the agency has specifically contracted for Industrial Disability benefits. If so, each miscellaneous non-industrial disability rate will be split into two components: 50 percent will become the Non-Industrial Disability rate and 50 percent will become the Industrial Disability rate.

Service Retirement

Retirement rates vary by age, service, and formula, except for the safety $\frac{1}{2}$ @ 55 and 2% @ 55 formulas, where retirement rates vary by age only.

Service Retirement**Public Agency Miscellaneous 1.5% @ 65**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.008	0.011	0.013	0.015	0.017	0.019
51	0.007	0.010	0.012	0.013	0.015	0.017
52	0.010	0.014	0.017	0.019	0.021	0.024
53	0.008	0.012	0.015	0.017	0.019	0.022
54	0.012	0.016	0.019	0.022	0.025	0.028
55	0.018	0.025	0.031	0.035	0.038	0.043
56	0.015	0.021	0.025	0.029	0.032	0.036
57	0.020	0.028	0.033	0.038	0.043	0.048
58	0.024	0.033	0.040	0.046	0.052	0.058
59	0.028	0.039	0.048	0.054	0.060	0.067
60	0.049	0.069	0.083	0.094	0.105	0.118
61	0.062	0.087	0.106	0.120	0.133	0.150
62	0.104	0.146	0.177	0.200	0.223	0.251
63	0.099	0.139	0.169	0.191	0.213	0.239
64	0.097	0.136	0.165	0.186	0.209	0.233
65	0.140	0.197	0.240	0.271	0.302	0.339
66	0.092	0.130	0.157	0.177	0.198	0.222
67	0.129	0.181	0.220	0.249	0.277	0.311
68	0.092	0.129	0.156	0.177	0.197	0.221
69	0.092	0.130	0.158	0.178	0.199	0.224
70	0.103	0.144	0.175	0.198	0.221	0.248

Public Agency Miscellaneous 2% @ 60

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.011	0.015	0.018	0.021	0.023	0.026
51	0.009	0.013	0.016	0.018	0.020	0.023
52	0.013	0.018	0.022	0.025	0.028	0.031
53	0.011	0.016	0.019	0.022	0.025	0.028
54	0.015	0.021	0.025	0.028	0.032	0.036
55	0.023	0.032	0.039	0.044	0.049	0.055
56	0.019	0.027	0.032	0.037	0.041	0.046
57	0.025	0.035	0.042	0.048	0.054	0.060
58	0.030	0.042	0.051	0.058	0.065	0.073
59	0.035	0.049	0.060	0.068	0.076	0.085
60	0.062	0.087	0.105	0.119	0.133	0.149
61	0.079	0.110	0.134	0.152	0.169	0.190
62	0.132	0.186	0.225	0.255	0.284	0.319
63	0.126	0.178	0.216	0.244	0.272	0.305
64	0.122	0.171	0.207	0.234	0.262	0.293
65	0.173	0.243	0.296	0.334	0.373	0.418
66	0.114	0.160	0.194	0.219	0.245	0.274
67	0.159	0.223	0.271	0.307	0.342	0.384
68	0.113	0.159	0.193	0.218	0.243	0.273
69	0.114	0.161	0.195	0.220	0.246	0.276
70	0.127	0.178	0.216	0.244	0.273	0.306

Service Retirement**Public Agency Miscellaneous 2% @ 55**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.015	0.020	0.024	0.029	0.033	0.039
51	0.013	0.016	0.020	0.024	0.027	0.033
52	0.014	0.018	0.022	0.027	0.030	0.036
53	0.017	0.022	0.027	0.032	0.037	0.043
54	0.027	0.034	0.041	0.049	0.056	0.067
55	0.050	0.064	0.078	0.094	0.107	0.127
56	0.045	0.057	0.069	0.083	0.095	0.113
57	0.048	0.061	0.074	0.090	0.102	0.122
58	0.052	0.066	0.080	0.097	0.110	0.131
59	0.060	0.076	0.092	0.111	0.127	0.151
60	0.072	0.092	0.112	0.134	0.153	0.182
61	0.089	0.113	0.137	0.165	0.188	0.224
62	0.128	0.162	0.197	0.237	0.270	0.322
63	0.129	0.164	0.199	0.239	0.273	0.325
64	0.116	0.148	0.180	0.216	0.247	0.294
65	0.174	0.221	0.269	0.323	0.369	0.439
66	0.135	0.171	0.208	0.250	0.285	0.340
67	0.133	0.169	0.206	0.247	0.282	0.336
68	0.118	0.150	0.182	0.219	0.250	0.297
69	0.116	0.147	0.179	0.215	0.246	0.293
70	0.138	0.176	0.214	0.257	0.293	0.349

Public Agency Miscellaneous 2.5% @ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.026	0.033	0.040	0.048	0.055	0.062
51	0.021	0.026	0.032	0.038	0.043	0.049
52	0.021	0.026	0.032	0.038	0.043	0.049
53	0.026	0.033	0.040	0.048	0.055	0.062
54	0.043	0.054	0.066	0.078	0.089	0.101
55	0.088	0.112	0.136	0.160	0.184	0.208
56	0.055	0.070	0.085	0.100	0.115	0.130
57	0.061	0.077	0.094	0.110	0.127	0.143
58	0.072	0.091	0.111	0.130	0.150	0.169
59	0.083	0.105	0.128	0.150	0.173	0.195
60	0.088	0.112	0.136	0.160	0.184	0.208
61	0.083	0.105	0.128	0.150	0.173	0.195
62	0.121	0.154	0.187	0.220	0.253	0.286
63	0.105	0.133	0.162	0.190	0.219	0.247
64	0.105	0.133	0.162	0.190	0.219	0.247
65	0.143	0.182	0.221	0.260	0.299	0.338
66	0.105	0.133	0.162	0.190	0.219	0.247
67	0.105	0.133	0.162	0.190	0.219	0.247
68	0.105	0.133	0.162	0.190	0.219	0.247
69	0.105	0.133	0.162	0.190	0.219	0.247
70	0.125	0.160	0.194	0.228	0.262	0.296

Service Retirement**Public Agency Miscellaneous 2.7% @ 55**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.028	0.035	0.043	0.050	0.058	0.065
51	0.022	0.028	0.034	0.040	0.046	0.052
52	0.022	0.028	0.034	0.040	0.046	0.052
53	0.028	0.035	0.043	0.050	0.058	0.065
54	0.044	0.056	0.068	0.080	0.092	0.104
55	0.091	0.116	0.140	0.165	0.190	0.215
56	0.061	0.077	0.094	0.110	0.127	0.143
57	0.063	0.081	0.098	0.115	0.132	0.150
58	0.074	0.095	0.115	0.135	0.155	0.176
59	0.083	0.105	0.128	0.150	0.173	0.195
60	0.088	0.112	0.136	0.160	0.184	0.208
61	0.085	0.109	0.132	0.155	0.178	0.202
62	0.124	0.158	0.191	0.225	0.259	0.293
63	0.107	0.137	0.166	0.195	0.224	0.254
64	0.107	0.137	0.166	0.195	0.224	0.254
65	0.146	0.186	0.225	0.265	0.305	0.345
66	0.107	0.137	0.166	0.195	0.224	0.254
67	0.107	0.137	0.166	0.195	0.224	0.254
68	0.107	0.137	0.166	0.195	0.224	0.254
69	0.107	0.137	0.166	0.195	0.224	0.254
70	0.129	0.164	0.199	0.234	0.269	0.304

Public Agency Miscellaneous 3% @ 60

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.026	0.033	0.040	0.048	0.055	0.062
51	0.021	0.026	0.032	0.038	0.043	0.049
52	0.019	0.025	0.030	0.035	0.040	0.046
53	0.025	0.032	0.038	0.045	0.052	0.059
54	0.039	0.049	0.060	0.070	0.081	0.091
55	0.083	0.105	0.128	0.150	0.173	0.195
56	0.055	0.070	0.085	0.100	0.115	0.130
57	0.061	0.077	0.094	0.110	0.127	0.143
58	0.072	0.091	0.111	0.130	0.150	0.169
59	0.080	0.102	0.123	0.145	0.167	0.189
60	0.094	0.119	0.145	0.170	0.196	0.221
61	0.088	0.112	0.136	0.160	0.184	0.208
62	0.127	0.161	0.196	0.230	0.265	0.299
63	0.110	0.140	0.170	0.200	0.230	0.260
64	0.110	0.140	0.170	0.200	0.230	0.260
65	0.149	0.189	0.230	0.270	0.311	0.351
66	0.110	0.140	0.170	0.200	0.230	0.260
67	0.110	0.140	0.170	0.200	0.230	0.260
68	0.110	0.140	0.170	0.200	0.230	0.260
69	0.110	0.140	0.170	0.200	0.230	0.260
70	0.132	0.168	0.204	0.240	0.276	0.312

Service Retirement**Public Agency Fire ½ @ 55 and 2% @ 55**

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
50	0.01588	56	0.11079
51	0.00000	57	0.00000
52	0.03442	58	0.09499
53	0.01990	59	0.04409
54	0.04132	60	1.00000
55	0.07513		

Public Agency Police ½ @ 55 and 2% @ 55

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
50	0.02552	56	0.06921
51	0.00000	57	0.05113
52	0.01637	58	0.07241
53	0.02717	59	0.07043
54	0.00949	60	1.00000
55	0.16674		

Public Agency Police 2% @ 50

<u>Age</u>	<u>Duration of Service</u>					
	<u>5 Years</u>	<u>10 Years</u>	<u>15 Years</u>	<u>20 Years</u>	<u>25 Years</u>	<u>30 Years</u>
50	0.014	0.014	0.014	0.014	0.025	0.045
51	0.012	0.012	0.012	0.012	0.023	0.040
52	0.026	0.026	0.026	0.026	0.048	0.086
53	0.052	0.052	0.052	0.052	0.096	0.171
54	0.070	0.070	0.070	0.070	0.128	0.227
55	0.090	0.090	0.090	0.090	0.165	0.293
56	0.064	0.064	0.064	0.064	0.117	0.208
57	0.071	0.071	0.071	0.071	0.130	0.232
58	0.063	0.063	0.063	0.063	0.115	0.205
59	0.140	0.140	0.140	0.140	0.174	0.254
60	0.140	0.140	0.140	0.140	0.172	0.251
61	0.140	0.140	0.140	0.140	0.172	0.251
62	0.140	0.140	0.140	0.140	0.172	0.251
63	0.140	0.140	0.140	0.140	0.172	0.251
64	0.140	0.140	0.140	0.140	0.172	0.251
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police and Other Safety.

Service Retirement**Public Agency Fire 2%@50**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.007	0.007	0.007	0.007	0.010	0.015
51	0.008	0.008	0.008	0.008	0.013	0.019
52	0.017	0.017	0.017	0.017	0.027	0.040
53	0.047	0.047	0.047	0.047	0.072	0.107
54	0.064	0.064	0.064	0.064	0.098	0.147
55	0.087	0.087	0.087	0.087	0.134	0.200
56	0.078	0.078	0.078	0.078	0.120	0.180
57	0.090	0.090	0.090	0.090	0.139	0.208
58	0.079	0.079	0.079	0.079	0.122	0.182
59	0.073	0.073	0.073	0.073	0.112	0.168
60	0.114	0.114	0.114	0.114	0.175	0.262
61	0.114	0.114	0.114	0.114	0.175	0.262
62	0.114	0.114	0.114	0.114	0.175	0.262
63	0.114	0.114	0.114	0.114	0.175	0.262
64	0.114	0.114	0.114	0.114	0.175	0.262
65	1.000	1.000	1.000	1.000	1.000	1.000

Public Agency Police 3%@ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.019	0.019	0.019	0.019	0.040	0.060
51	0.024	0.024	0.024	0.024	0.049	0.074
52	0.024	0.024	0.024	0.024	0.051	0.077
53	0.059	0.059	0.059	0.059	0.121	0.183
54	0.069	0.069	0.069	0.069	0.142	0.215
55	0.116	0.116	0.116	0.116	0.240	0.363
56	0.076	0.076	0.076	0.076	0.156	0.236
57	0.058	0.058	0.058	0.058	0.120	0.181
58	0.076	0.076	0.076	0.076	0.157	0.237
59	0.094	0.094	0.094	0.094	0.193	0.292
60	0.141	0.141	0.141	0.141	0.290	0.438
61	0.094	0.094	0.094	0.094	0.193	0.292
62	0.118	0.118	0.118	0.118	0.241	0.365
63	0.094	0.094	0.094	0.094	0.193	0.292
64	0.094	0.094	0.094	0.094	0.193	0.292
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police and Other Safety.

Service Retirement**Public Agency Fire 3%@55**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.012	0.012	0.012	0.018	0.028	0.033
51	0.008	0.008	0.008	0.012	0.019	0.022
52	0.018	0.018	0.018	0.027	0.042	0.050
53	0.043	0.043	0.043	0.062	0.098	0.114
54	0.057	0.057	0.057	0.083	0.131	0.152
55	0.092	0.092	0.092	0.134	0.211	0.246
56	0.081	0.081	0.081	0.118	0.187	0.218
57	0.100	0.100	0.100	0.146	0.230	0.268
58	0.081	0.081	0.081	0.119	0.187	0.219
59	0.078	0.078	0.078	0.113	0.178	0.208
60	0.117	0.117	0.117	0.170	0.267	0.312
61	0.078	0.078	0.078	0.113	0.178	0.208
62	0.098	0.098	0.098	0.141	0.223	0.260
63	0.078	0.078	0.078	0.113	0.178	0.208
64	0.078	0.078	0.078	0.113	0.178	0.208
65	1.000	1.000	1.000	1.000	1.000	1.000

Public Agency Police 3%@ 50

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.070	0.070	0.070	0.131	0.193	0.249
51	0.050	0.050	0.050	0.095	0.139	0.180
52	0.061	0.061	0.061	0.116	0.171	0.220
53	0.069	0.069	0.069	0.130	0.192	0.247
54	0.071	0.071	0.071	0.134	0.197	0.255
55	0.090	0.090	0.090	0.170	0.250	0.322
56	0.069	0.069	0.069	0.130	0.191	0.247
57	0.080	0.080	0.080	0.152	0.223	0.288
58	0.087	0.087	0.087	0.164	0.242	0.312
59	0.090	0.090	0.090	0.170	0.251	0.323
60	0.135	0.135	0.135	0.255	0.377	0.485
61	0.090	0.090	0.090	0.170	0.251	0.323
62	0.113	0.113	0.113	0.213	0.314	0.404
63	0.090	0.090	0.090	0.170	0.251	0.323
64	0.090	0.090	0.090	0.170	0.251	0.323
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police and Other Safety.

Service Retirement**Public Agency Fire 3%@50**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.034	0.034	0.034	0.048	0.068	0.080
51	0.046	0.046	0.046	0.065	0.092	0.109
52	0.069	0.069	0.069	0.097	0.138	0.163
53	0.084	0.084	0.084	0.117	0.166	0.197
54	0.103	0.103	0.103	0.143	0.204	0.241
55	0.127	0.127	0.127	0.177	0.252	0.298
56	0.121	0.121	0.121	0.169	0.241	0.285
57	0.101	0.101	0.101	0.141	0.201	0.238
58	0.118	0.118	0.118	0.165	0.235	0.279
59	0.100	0.100	0.100	0.140	0.199	0.236
60	0.150	0.150	0.150	0.210	0.299	0.354
61	0.100	0.100	0.100	0.140	0.199	0.236
62	0.125	0.125	0.125	0.175	0.249	0.295
63	0.100	0.100	0.100	0.140	0.199	0.236
64	0.100	0.100	0.100	0.140	0.199	0.236
65	1.000	1.000	1.000	1.000	1.000	1.000

Schools 2%@ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.005	0.009	0.013	0.015	0.016	0.018
51	0.005	0.010	0.014	0.017	0.019	0.021
52	0.006	0.012	0.017	0.020	0.022	0.025
53	0.007	0.014	0.019	0.023	0.026	0.029
54	0.012	0.024	0.033	0.039	0.044	0.049
55	0.024	0.048	0.067	0.079	0.088	0.099
56	0.020	0.039	0.055	0.065	0.072	0.081
57	0.021	0.042	0.059	0.070	0.078	0.087
58	0.025	0.050	0.070	0.083	0.092	0.103
59	0.029	0.057	0.080	0.095	0.105	0.118
60	0.037	0.073	0.102	0.121	0.134	0.150
61	0.046	0.090	0.126	0.149	0.166	0.186
62	0.076	0.151	0.212	0.250	0.278	0.311
63	0.069	0.136	0.191	0.225	0.251	0.281
64	0.067	0.133	0.185	0.219	0.244	0.273
65	0.091	0.180	0.251	0.297	0.331	0.370
66	0.072	0.143	0.200	0.237	0.264	0.295
67	0.067	0.132	0.185	0.218	0.243	0.272
68	0.060	0.118	0.165	0.195	0.217	0.243
69	0.067	0.133	0.187	0.220	0.246	0.275
70	0.066	0.131	0.183	0.216	0.241	0.270

Miscellaneous

Superfunded Status

Prior to enactment of the Public Employees' Pension Reform Act (PEPRA) that became effective January 1, 2013, a plan in superfunded status (actuarial value of assets exceeding present value of benefits) would normally pay a zero employer contribution rate while also being permitted to use its superfunded assets to pay its employees' normal member contributions.

However, Section 7522.52(a) of PEPRA states, "In any fiscal year a public employer's contribution to a defined benefit plan, in combination with employee contributions to that defined benefit plan, shall not be less than the total normal cost rate..." This means that not only must employers pay their employer normal cost regardless of plan surplus, but also, employers may no longer use superfunded assets to pay employee normal member contributions.

Internal Revenue Code Section 415

The limitations on benefits imposed by Internal Revenue Code Section 415 are taken into account in this valuation. Each year the impact of any changes in this limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base. This results in lower contributions for those employers contributing to the Replacement Benefit Fund and protects CalPERS from prefunding expected benefits in excess of limits imposed by federal tax law.

Internal Revenue Code Section 401(a)(17)

The limitations on compensation imposed by Internal Revenue Code Section 401(a)(17) are taken into account in this valuation. Each year, the impact of any changes in the compensation limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base.

PEPRA Assumptions

The Public Employees' Pension Reform Act of 2013 (PEPRA) mandated new benefit formulas and new member contributions for new members (as defined by PEPRA) hired after January 1, 2013. For non-pooled plans, these new members will first be reflected in the June 30, 2013 non-pooled plan valuations. New members in pooled plans will first be reflected in the new Miscellaneous and Safety risk pools created by the CalPERS Board in November 2012 in response to the passage of PEPRA, also beginning with the June 30, 2013 valuation. Different assumptions for these new PEPRA members will be disclosed in the 2013 valuation.

APPENDIX B

PRINCIPAL PLAN PROVISIONS

The following is a description of the principal plan provisions used in calculating costs and liabilities. We have indicated whether a plan provision is standard or optional. Standard benefits are applicable to all members while optional benefits vary among employers. Optional benefits that apply to a single period of time, such as Golden Handshakes, have not been included. Many of the statements in this summary are general in nature, and are intended to provide an easily understood summary of the complex Public Employees' Retirement Law. The law itself governs in all situations.

PEPRA Benefit Changes

The Public Employees' Pension Reform Act of 2013 (PEPRA) requires new benefits and member contributions for new members as defined by PEPRA, that are hired after January 1, 2013. For non-pooled plans, these members will first be reflected in June 30, 2013 non-pooled plan valuations. Members in pooled plans will be reflected in the new Miscellaneous and Safety risk pools created by the CalPERS Board in November 2012 in response to the passage of PEPRA, beginning with the June 30, 2013 valuation.

Service Retirement

Eligibility

A classic CalPERS member becomes eligible for Service Retirement upon attainment of age 50 with at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements). For employees hired into a plan with the 1.5% at 65 formula, eligibility for service retirement is age 55 with at least 5 years of service.

Benefit

The Service Retirement benefit is a monthly allowance equal to the product of the *benefit factor*, *years of service*, and *final compensation*.

- The *benefit factor* depends on the benefit formula specified in your agency's contract. The table below shows the factors for each of the available formulas. Factors vary by the member's age at retirement. Listed are the factors for retirement at whole year ages:

Miscellaneous Plan Formulas

Retirement Age	1.5% at 65	2% at 60	2% at 55	2.5% at 55	2.7% at 55	3% at 60
50	0.5000%	1.092%	1.426%	2.0%	2.0%	2.0%
51	0.5667%	1.156%	1.522%	2.1%	2.14%	2.1%
52	0.6334%	1.224%	1.628%	2.2%	2.28%	2.2%
53	0.7000%	1.296%	1.742%	2.3%	2.42%	2.3%
54	0.7667%	1.376%	1.866%	2.4%	2.56%	2.4%
55	0.8334%	1.460%	2.0%	2.5%	2.7%	2.5%
56	0.9000%	1.552%	2.052%	2.5%	2.7%	2.6%
57	0.9667%	1.650%	2.104%	2.5%	2.7%	2.7%
58	1.0334%	1.758%	2.156%	2.5%	2.7%	2.8%
59	1.1000%	1.874%	2.210%	2.5%	2.7%	2.9%
60	1.1667%	2.0%	2.262%	2.5%	2.7%	3.0%
61	1.2334%	2.134%	2.314%	2.5%	2.7%	3.0%
62	1.3000%	2.272%	2.366%	2.5%	2.7%	3.0%
63	1.3667%	2.418%	2.418%	2.5%	2.7%	3.0%
64	1.4334%	2.418%	2.418%	2.5%	2.7%	3.0%
65 & Up	1.5000%	2.418%	2.418%	2.5%	2.7%	3.0%

Safety Plan Formulas

Retirement Age	½ at 55 *	2% at 55	2% at 50	3% at 55	3% at 50
50	1.783%	1.426%	2.0%	2.40%	3.0%
51	1.903%	1.522%	2.14%	2.52%	3.0%
52	2.035%	1.628%	2.28%	2.64%	3.0%
53	2.178%	1.742%	2.42%	2.76%	3.0%
54	2.333%	1.866%	2.56%	2.88%	3.0%
55 & Up	2.5%	2.0%	2.7%	3.0%	3.0%

* For this formula, the benefit factor also varies by entry age. The factors shown are for members with an entry age of 35 or greater. If entry age is less than 35, then the age 55 benefit factor is 50% divided by the difference between age 55 and entry age. The benefit factor for ages prior to age 55 is the same proportion of the age 55 benefit factor as in the above table.

- The *years of service* is the amount credited by CalPERS to a member while he or she is employed in this group (or for other periods that are recognized under the employer's contract with CalPERS). For a member who has earned service with multiple CalPERS employers, the benefit from each employer is calculated separately according to each employer's contract, and then added together for the total allowance. An agency may contract for an optional benefit where any unused sick leave accumulated at the time of retirement will be converted to credited service at a rate of 0.004 years of service for each day of sick leave.
- The *final compensation* is the monthly average of the member's highest 36 or 12 consecutive months' full-time equivalent monthly pay (no matter which CalPERS employer paid this compensation). The standard benefit is 36 months. Employers have the option of providing a final compensation equal to the highest 12 consecutive months. Final compensation must be defined by the highest 36 consecutive months' pay under the 1.5% at 65 formula.
- Employees must be covered by Social Security with the 1.5% at 65 formula. Social Security is optional for all other benefit formulas. For employees covered by Social Security, the Modified formula is the standard benefit. Under this type of formula, the final compensation is offset by \$133.33 (or by one third if the final compensation is less than \$400). Employers may contract for the Full benefit with Social Security that will eliminate the offset applicable to the final compensation. For employees not covered by Social Security, the Full benefit is paid with no offsets. Auxiliary organizations of the CSUC system may elect reduced contribution rates, in which case the offset is \$317 if members are not covered by Social Security or \$513 if members are covered by Social Security.
- The Miscellaneous Service Retirement benefit is not capped. The Safety Service Retirement benefit is capped at 90 percent of final compensation.

Vested Deferred Retirement**Eligibility for Deferred Status**

A CalPERS member becomes eligible for a deferred vested retirement benefit when he or she leaves employment, keeps his or her contribution account balance on deposit with CalPERS, **and** has earned at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements).

Eligibility to Start Receiving Benefits

The CalPERS member becomes eligible to receive the deferred retirement benefit upon satisfying the eligibility requirements for Deferred Status and upon attainment of age 50 (55 for employees hired into a 1.5% @ 65 plan).

Benefit

The vested deferred retirement benefit is the same as the Service Retirement benefit, where the benefit factor is based on the member's age at allowance commencement. For members who have earned service with multiple CalPERS employers, the benefit from each employer is calculated separately according to each employer's contract, and then added together for the total allowance.

Non-Industrial (Non-Job Related) Disability Retirement

Eligibility

A CalPERS member is eligible for Non-Industrial Disability Retirement if he or she becomes *disabled* and has at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements). There is no special age requirement. *Disabled* means the member is unable to perform his or her job because of an illness or injury, which is expected to be permanent or to last indefinitely. The illness or injury does not have to be job related. A CalPERS member must be actively employed by any CalPERS employer at the time of disability in order to be eligible for this benefit.

Standard Benefit

The standard Non-Industrial Disability Retirement benefit is a monthly allowance equal to 1.8 percent of final compensation, multiplied by *service*, which is determined as follows:

- *Service* is CalPERS credited service, for members with less than 10 years of service or greater than 18.518 years of service; or
- *Service* is CalPERS credited service plus the additional number of years that the member would have worked until age 60, for members with at least 10 years but not more than 18.518 years of service. The maximum benefit in this case is 33 1/3 percent of Final Compensation.

Improved Benefit

Employers have the option of providing the improved Non-Industrial Disability Retirement benefit. This benefit provides a monthly allowance equal to 30% of final compensation for the first 5 years of service, plus 1% for each additional year of service to a maximum of 50% of final compensation.

Members who are eligible for a larger service retirement benefit may choose to receive that benefit in lieu of a disability benefit. Members eligible to retire, and who have attained the normal retirement age determined by their service retirement benefit formula, will receive the same dollar amount for disability retirement as that payable for service retirement. For members who have earned service with multiple CalPERS employers, the benefit attributed to each employer is the total disability allowance multiplied by the ratio of service with a particular employer to the total CalPERS service.

Industrial (Job Related) Disability Retirement

All safety members have this benefit. For miscellaneous members, employers have the option of providing this benefit. An employer may choose to provide the Increased benefit option or the Improved benefit option.

Eligibility

An employee is eligible for Industrial Disability Retirement if he or she becomes disabled while working, where disabled means the member is unable to perform the duties of the job because of a work-related illness or injury, which is, expected to be permanent or to last indefinitely. A CalPERS member who has left active employment within this group is not eligible for this benefit, except to the extent described below.

Standard Benefit

The standard Industrial Disability Retirement benefit is a monthly allowance equal to 50 percent of final compensation.

Increased Benefit (75 percent of Final Compensation)

The increased Industrial Disability Retirement benefit is a monthly allowance equal to 75 percent final compensation for total disability.

Improved Benefit (50 percent to 90 percent of Final Compensation)

The improved Industrial Disability Retirement benefit is a monthly allowance equal to the Workman's Compensation Appeals Board permanent disability rate percentage (if 50 percent or greater, with a maximum of 90 percent) times the final compensation.

For a CalPERS member not actively employed in this group who became disabled while employed by some other CalPERS employer, the benefit is a return of accumulated member contributions with respect to employment in this group. With the standard or increased benefit, a member may also choose to receive the annuitization of the accumulated member contributions.

If a member is eligible for Service Retirement and if the Service Retirement benefit is more than the Industrial Disability Retirement benefit, the member may choose to receive the larger benefit.

Post-Retirement Death Benefit

Standard Lump Sum Payment

Upon the death of a retiree, a one-time lump sum payment of \$500 will be made to the retiree's designated survivor(s), or to the retiree's estate.

Improved Lump Sum Payment

Employers have the option of providing an improved lump sum death benefit of \$600, \$2,000, \$3,000, \$4,000 or \$5,000.

Form of Payment for Retirement Allowance

Standard Form of Payment

Generally, the retirement allowance is paid to the retiree in the form of an annuity for as long as he or she is alive. The retiree may choose to provide for a portion of his or her allowance to be paid to any designated beneficiary after the retiree's death. CalPERS provides for a variety of such benefit options, which the retiree pays for by taking a reduction in his or her retirement allowance. Such reduction takes into account the amount to be provided to the beneficiary and the probable duration of payments (based on the ages of the member and beneficiary) made subsequent to the member's death.

Improved Form of Payment (Post Retirement Survivor Allowance)

Employers have the option to contract for the post retirement survivor allowance.

For retirement allowances with respect to service subject to the modified formula, 25 percent of the retirement allowance will automatically be continued to certain statutory beneficiaries upon the death of the retiree, without a reduction in the retiree's allowance. For retirement allowances with respect to service subject to the full or supplemental formula, 50 percent of the retirement allowance will automatically be continued to certain statutory beneficiaries upon the death of the retiree, without a reduction in the retiree's allowance. This additional benefit is often referred to as post retirement survivor allowance (PRSA) or simply as survivor continuance.

In other words, 25 percent or 50 percent of the allowance, the continuance portion, is paid to the retiree for as long as he or she is alive, and that same amount is continued to the retiree's spouse (or if no eligible spouse, to unmarried children until they attain age 18; or, if no eligible children, to a qualifying dependent parent) for the rest of his or her lifetime. This benefit will not be discontinued in the event the spouse remarries.

The remaining 75 percent or 50 percent of the retirement allowance, which may be referred to as the option portion of the benefit, is paid to the retiree as an annuity for as long as he or she is alive. Or, the retiree may choose to provide for some of this option portion to be paid to any designated beneficiary after the retiree's death. Benefit options applicable to the option portion are the same as those offered with the standard form. The reduction is calculated in the same manner but is applied only to the option portion.

Pre-Retirement Death Benefits

Basic Death Benefit

This is a standard benefit.

Eligibility

An employee's beneficiary (or estate) may receive the Basic Death benefit if the member dies while actively employed. A CalPERS member must be actively employed with the CalPERS employer providing this benefit to be eligible for this benefit. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this Basic Death benefit.

Benefit

The Basic Death Benefit is a lump sum in the amount of the member's accumulated contributions, where interest is currently credited at 7.5 percent per year, plus a lump sum in the amount of one month's salary for each completed year of current service, up to a maximum of six months' salary. For purposes of this benefit, one month's salary is defined as the member's average monthly full-time rate of compensation during the 12 months preceding death.

1957 Survivor Benefit

This is a standard benefit.

Eligibility

An employee's *eligible survivor(s)* may receive the 1957 Survivor benefit if the member dies while actively employed, has attained at least age 50, and has at least 5 years of credited service (total service across all CalPERS employers and with certain other Retirement Systems with which CalPERS has reciprocity agreements). A CalPERS member must be actively employed with the CalPERS employer providing this benefit to be eligible for this benefit. An eligible survivor means the surviving spouse to whom the member was married at least one year before death or, if there is no eligible spouse, to the member's unmarried children under age 18. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this 1957 Survivor benefit.

Benefit

The 1957 Survivor benefit is a monthly allowance equal to one-half of the unmodified Service Retirement benefit that the member would have been entitled to receive if the member had retired on the date of his or her death. If the benefit is payable to the spouse, the benefit is discontinued upon the death of the spouse. If the benefit is payable to a dependent child, the benefit will be discontinued upon death or attainment of age 18, unless the child is disabled. The total amount paid will be at least equal to the Basic Death benefit.

Optional Settlement 2W Death Benefit

This is an optional benefit.

Eligibility

An employee's *eligible survivor* may receive the Optional Settlement 2W Death benefit if the member dies while actively employed, has attained at least age 50, and has at least 5 years of credited service (total service across all CalPERS employers and with certain other Retirement Systems with which CalPERS has reciprocity agreements). A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married at least one year before death. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this Optional Settlement 2W Death benefit.

Benefit

The Optional Settlement 2W Death benefit is a monthly allowance equal to the Service Retirement benefit that the member would have received had the member retired on the date of his or her death and elected Optional Settlement 2W. (A retiree who elects Optional Settlement 2W receives an allowance that has been reduced so that it will continue to be paid after his or her death to a surviving beneficiary.) The allowance is payable as long as the surviving spouse lives, at which time it is continued to any unmarried children under age 18, if applicable. The total amount paid will be at least equal to the Basic Death Benefit.

Special Death Benefit

This is a standard benefit for safety members. An employer may elect to provide this benefit for miscellaneous members.

Eligibility

An employee's *eligible survivor(s)* may receive the Special Death benefit if the member dies while actively employed and the death is job-related. A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married prior to the onset of the injury or illness that resulted in death. If there is no eligible spouse, an eligible survivor means the member's unmarried children under age 22. An eligible survivor who chooses to receive this benefit will not receive any other death benefit.

Benefit

The Special Death benefit is a monthly allowance equal to 50% of final compensation, and will be increased whenever the compensation paid to active employees is increased but ceasing to increase when the member would have attained age 50. The allowance is payable to the surviving spouse until death at which time the allowance is continued to any unmarried children under age 22. There is a guarantee that the total amount paid will at least equal the Basic Death Benefit.

If the member's death is the result of an accident or injury caused by external violence or physical force incurred in the performance of the member's duty, and there are *eligible* surviving children (*eligible* means unmarried children under age 22) in addition to an eligible spouse, then an **additional monthly allowance** is paid equal to the following:

- | | |
|-----------------------------------|-----------------------------|
| • if 1 eligible child: | 12.5% of final compensation |
| • if 2 eligible children: | 20.0% of final compensation |
| • if 3 or more eligible children: | 25.0% of final compensation |

Alternate Death Benefit for Local Fire Members

This is an optional benefit available only to local fire members.

Eligibility

An employee's *eligible survivor(s)* may receive the Alternate Death benefit in lieu of the Basic Death Benefit or the 1957 Survivor Benefit if the member dies while actively employed and has at least 20 years of total CalPERS service. A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married prior to the onset of the injury or illness that resulted in death. If there is no eligible spouse, an eligible survivor means the member's unmarried children under age 18.

Benefit

The Alternate Death benefit is a monthly allowance equal to the Service Retirement benefit that the member would have received had the member retired on the date of his or her death and elected Optional Settlement 2W. (A retiree who elects Optional Settlement 2W receives an allowance that has been reduced so that it will continue to be paid after his or her death to a surviving beneficiary.) If the member has not yet attained age 50, the benefit is equal to that which would be payable if the member had retired at age 50, based on service credited at the time of death. The allowance is payable as long as the surviving spouse lives, at which time it is continued to any unmarried children under age 18, if applicable. The total amount paid will be at least equal to the Basic Death Benefit.

Cost-of-Living Adjustments (COLA)

Standard Benefit

Beginning the second calendar year after the year of retirement, retirement and survivor allowances will be annually adjusted on a compound basis by 2 percent.

Improved Benefit

Employers have the option of providing any of these improved cost-of-living adjustments by contracting for any one of these Class 1 optional benefits. An improved COLA is not available in conjunction with the 1.5% at 65 formula.

Beginning the second calendar year after the year of retirement, retirement and survivor allowances will be annually adjusted on a compound basis by either 3 percent, 4 percent or 5 percent. However, the cumulative adjustment may not be greater than the cumulative change in the Consumer Price Index since the date of retirement.

Purchasing Power Protection Allowance (PPPA)

Retirement and survivor allowances are protected against inflation by PPPA. PPPA benefits are cost-of-living adjustments that are intended to maintain an individual's allowance at 80 percent of the initial allowance at retirement adjusted for inflation since retirement. The PPPA benefit will be coordinated with other cost-of-living adjustments provided under the plan.

Employee Contributions

Each employee contributes toward his or her retirement based upon the retirement formula. The standard employee contribution is as described below.

The percent contributed below the monthly compensation breakpoint is 0 percent.

The monthly compensation breakpoint is \$0 for full and supplemental formula members and \$133.33 for employees covered by the modified formula.

The percent contributed above the monthly compensation breakpoint depends upon the benefit formula, as shown in the table below.

<u>Benefit Formula</u>	<u>Percent Contributed above the Breakpoint</u>
Miscellaneous, 1.5% at 65	2%
Miscellaneous, 2% at 60	7%
Miscellaneous, 2% at 55	7%
Miscellaneous, 2.5% at 55	8%
Miscellaneous, 2.7% at 55	8%
Miscellaneous, 3% at 60	8%
Safety, 1/2 at 55	Varies by entry age
Safety, 2% at 55	7%
Safety, 2% at 50	9%
Safety, 3% at 55	9%
Safety, 3% at 50	9%

The employer may choose to “pick-up” these contributions for the employees (Employer Paid Member Contributions or EPMC). An employer may also include Employee Cost Sharing in the contract, where employees contribute an additional percentage of compensation based on any optional benefit for which a contract amendment was made on or after January 1, 1979.

Auxiliary organizations of the CSUC system may elect reduced contribution rates, in which case the offset is \$317 and the contribution rate is 6 percent if members are not covered by Social Security. If members are covered by Social Security, the offset is \$513 and the contribution rate is 5 percent.

Refund of Employee Contributions

If the member’s service with the employer ends, and if the member does not satisfy the eligibility conditions for any of the retirement benefits above, the member may elect to receive a refund of his or her employee contributions, which are credited annually with 6 percent interest.

1959 Survivor Benefit

This is a pre-retirement death benefit available only to members not covered by Social Security. Any agency joining CalPERS subsequent to 1993 was required to provide this benefit if the members were not covered by Social Security. The benefit is optional for agencies joining CalPERS prior to 1994. Levels 1, 2 and 3 are now closed. Any new agency or any agency wishing to add this benefit or increase the current level must choose the 4th or Indexed Level.

This benefit is not included in the results presented in this valuation. More information on this benefit is available on the CalPERS website at www.calpers.ca.gov.

APPENDIX C

PARTICIPANT DATA

- **SUMMARY OF VALUATION DATA**
- **ACTIVE MEMBERS**
- **TRANSFERRED AND TERMINATED MEMBERS**
- **RETIRED MEMBERS AND BENEFICIARIES**

Summary of Valuation Data

	June 30, 2011	June 30, 2012
1. Active Members		
a) Counts	850	811
b) Average Attained Age	47.17	46.47
c) Average Entry Age to Rate Plan	35.34	35.52
d) Average Years of Service	11.83	10.95
e) Average Annual Covered Pay	\$ 63,176	\$ 61,910
f) Annual Covered Payroll	53,699,986	50,208,946
g) Projected Annual Payroll for Contribution Year	58,679,425	54,864,671
h) Present Value of Future Payroll	422,189,114	406,614,317
2. Transferred Members		
a) Counts	469	463
b) Average Attained Age	42.73	43.17
c) Average Years of Service	2.61	2.65
d) Average Annual Covered Pay	\$ 79,907	\$ 77,029
3. Terminated Members		
a) Counts	495	505
b) Average Attained Age	44.54	45.08
c) Average Years of Service	2.63	2.68
d) Average Annual Covered Pay	\$ 37,061	\$ 37,674
4. Retired Members and Beneficiaries		
a) Counts	1,683	1,329
b) Average Attained Age	69.38	68.18
c) Average Annual Benefits	\$ 16,541	\$ 23,421
5. Active to Retired Ratio [(1a) / (4a)]	0.51	0.61

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

Active Members

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

Distribution of Active Members by Age and Service

Attained Age	Years of Service at Valuation Date						Total
	0-4	5-9	10-14	15-19	20-25	25+	
15-24	9	0	0	0	0	0	9
25-29	40	6	0	0	0	0	46
30-34	45	25	6	0	0	0	76
35-39	30	31	18	4	1	0	84
40-44	44	30	30	22	3	0	129
45-49	34	20	30	23	21	9	137
50-54	33	22	39	22	25	23	164
55-59	19	14	24	12	16	16	101
60-64	8	11	14	10	6	4	53
65 and over	3	3	6	0	0	0	12
All Ages	265	162	167	93	72	52	811

Distribution of Average Annual Salaries by Age and Service

Attained Age	Years of Service at Valuation Date						Average
	0-4	5-9	10-14	15-19	20-25	25+	
15-24	\$40,453	\$0	\$0	\$0	\$0	\$0	\$40,453
25-29	49,735	46,636	0	0	0	0	49,331
30-34	48,936	56,597	71,655	0	0	0	53,249
35-39	51,372	60,290	62,331	70,428	75,460	0	58,206
40-44	50,415	62,179	65,528	64,635	55,282	0	59,204
45-49	59,211	72,058	67,494	71,220	74,266	74,654	68,238
50-54	61,776	67,097	66,743	82,055	62,794	64,839	66,976
55-59	72,124	68,092	62,266	61,045	66,912	70,890	66,885
60-64	45,126	69,870	59,422	61,602	76,597	73,130	62,823
65 and over	43,077	28,118	61,800	0	0	0	48,699
All Ages	\$53,688	\$62,670	\$64,926	\$69,844	\$68,068	\$69,037	\$61,910

Transferred and Terminated Members

Distribution of Transfers to Other CalPERS Plans by Age and Service

Attained Age	Years of Service at Valuation Date						Total	Average Salary
	0-4	5-9	10-14	15-19	20-25	25+		
15-24	1	0	0	0	0	0	1	\$29,939
25-29	38	0	0	0	0	0	38	65,443
30-34	93	2	0	0	0	0	95	75,599
35-39	63	4	2	0	0	0	69	77,265
40-44	60	7	2	0	0	0	69	78,574
45-49	38	15	0	1	1	0	55	76,073
50-54	36	12	9	4	0	0	61	87,526
55-59	36	9	1	2	0	0	48	73,820
60-64	18	4	0	1	1	0	24	85,812
65 and over	3	0	0	0	0	0	3	29,041
All Ages	386	53	14	8	2	0	463	77,029

Distribution of Terminated Participants with Funds on Deposit by Age and Service

Attained Age	Years of Service at Valuation Date						Total	Average Salary
	0-4	5-9	10-14	15-19	20-25	25+		
15-24	2	0	0	0	0	0	2	\$16,056
25-29	56	0	0	0	0	0	56	33,989
30-34	73	1	0	0	0	0	74	34,426
35-39	53	1	0	0	0	0	54	35,456
40-44	58	11	4	0	1	0	74	41,434
45-49	51	6	3	4	1	1	66	46,709
50-54	41	8	5	1	2	0	57	39,639
55-59	54	9	2	2	2	0	69	35,458
60-64	20	9	1	0	0	0	30	31,849
65 and over	18	3	2	0	0	0	23	35,532
All Ages	426	48	17	7	6	1	505	37,674

Retired Members and Beneficiaries**Distribution of Retirees and Beneficiaries by Age and Retirement Type***

Attained Age	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 30	0	0	0	1	0	1	2
30-34	0	0	2	0	0	1	3
35-39	0	0	2	0	0	0	2
40-44	0	2	5	0	0	0	7
45-49	0	6	1	1	0	2	10
50-54	44	8	2	0	0	5	59
55-59	164	9	8	1	0	15	197
60-64	288	18	12	0	0	16	334
65-69	209	4	7	1	0	14	235
70-74	119	3	1	0	0	20	143
75-79	90	7	0	2	0	18	117
80-84	64	5	1	0	0	29	99
85 and Over	68	9	0	0	0	44	121
All Ages	1046	71	41	6	0	165	1,329

Distribution of Average Annual Amounts for Retirees and Beneficiaries by Age and Retirement Type*

Attained Age	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Average
Under 30	\$0	\$0	\$0	\$4,016	\$0	\$4,450	\$4,233
30-34	0	0	188	0	0	4,450	1,608
35-39	0	0	153	0	0	0	153
40-44	0	21,962	158	0	0	0	6,388
45-49	0	14,760	4,650	2,898	0	11,996	12,010
50-54	16,014	13,435	221	0	0	27,036	16,063
55-59	25,794	13,571	1,374	13,696	0	15,733	23,417
60-64	29,044	12,450	4,847	0	0	19,539	26,825
65-69	31,612	11,519	6,753	1,112	0	14,974	29,409
70-74	25,071	18,360	3,977	0	0	16,553	23,591
75-79	21,409	12,912	0	14,191	0	21,370	20,771
80-84	20,594	5,960	58	0	0	18,277	18,969
85 and Over	16,634	8,988	0	0	0	14,167	15,168
All Ages	\$26,067	\$12,513	\$3,098	\$8,351	\$0	\$16,942	\$23,421

Retired Members and Beneficiaries (continued)**Distribution of Retirees and Beneficiaries by Years Retired and Retirement Type***

Years Retired	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 5 Yrs	419	8	10	2	0	64	503
5-9	276	10	18	2	0	42	348
10-14	140	15	5	0	0	25	185
15-19	91	11	3	1	0	14	120
20-24	55	10	3	1	0	12	81
25-29	37	7	0	0	0	2	46
30 and Over	28	10	2	0	0	6	46
All Years	1046	71	41	6	0	165	1,329

Distribution of Average Annual Amounts for Retirees and Beneficiaries by Years Retired and Retirement Type*

Years Retired	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Average
Under 5 Yrs	\$30,650	\$19,431	\$803	\$2,005	\$0	\$19,844	\$28,389
5-9	24,883	10,107	4,866	8,856	0	13,334	21,937
10-14	26,106	13,872	5,150	0	0	17,162	23,339
15-19	22,600	13,820	1,641	10,608	0	21,398	21,031
20-24	17,713	14,019	180	17,773	0	13,381	15,966
25-29	17,674	7,375	0	0	0	6,601	15,625
30 and Over	7,715	8,000	97	0	0	10,497	7,808
All Years	\$26,067	\$12,513	\$3,098	\$8,351	\$0	\$16,942	\$23,421

* Counts of members do not include alternate payees receiving benefits while the member is still working. Therefore, the total counts may not match information on page 25 of the report. Multiple records may exist for those who have service in more than one coverage group. This does not result in double counting of liabilities.

APPENDIX D

GLOSSARY OF ACTUARIAL TERMS

Glossary of Actuarial Terms

Accrued Liability *(also called Actuarial Accrued Liability or Entry Age Normal Accrued Liability)*

The total dollars needed as of the valuation date to fund all benefits earned in the past for *current* members.

Actuarial Assumptions

Assumptions made about certain events that will affect pension costs. Assumptions generally can be broken down into two categories: demographic and economic. Demographic assumptions include such things as mortality, disability and retirement rates. Economic assumptions include discount rate, salary growth and inflation.

Actuarial Methods

Procedures employed by actuaries to achieve certain funding goals of a pension plan. Actuarial methods include funding method, setting the length of time to fund the Accrued Liability and determining the Actuarial Value of Assets.

Actuarial Valuation

The determination, as of a valuation date, of the Normal Cost, Accrued liability, Actuarial Value of Assets and related actuarial present values for a pension plan. These valuations are performed annually or when an employer is contemplating a change to their plan provisions.

Actuarial Value of Assets

The Actuarial Value of Assets used for funding purposes is obtained through an asset smoothing technique where investment gains and losses are partially recognized in the year they are incurred, with the remainder recognized in subsequent years.

This method helps to dampen large fluctuations in the employer contribution rate.

Amortization Bases

Separate payment schedules for different portions of the Unfunded Liability. The total Unfunded Liability of a Risk Pool or non-pooled plan can be segregated by "cause," creating "bases" and each such base will be separately amortized and paid for over a specific period of time. However, all bases are amortized using investment and payroll assumptions from the current valuation. This can be likened to a home having a first mortgage of 24 years remaining payments and a second mortgage that has 10 years remaining payments. Each base or each mortgage note has its own terms (payment period, principal, etc.)

Generally, in an actuarial valuation, the separate bases consist of changes in unfunded liability due to contract amendments, actuarial assumption changes, actuarial methodology changes, and or gains and losses. Payment periods are determined by Board policy and vary based on the cause of the change.

Amortization Period

The number of years required to pay off an Amortization Base.

Annual Required Contributions (ARC)

The employer's periodic required annual contributions to a defined benefit pension plan as set forth in GASB Statement No. 27, calculated in accordance with the plan assumptions. The ARC is determined by multiplying the employer contribution rate by the payroll reported to CalPERS for the applicable fiscal year. However, if this contribution is fully prepaid in a lump sum, then the dollar value of the ARC is equal to the Lump Sum Prepayment.

Classic Member (under PEPPRA)

A classic member is a member who joined CalPERS prior to January, 1, 2013 and who is not defined as a new member under PEPPRA. (See definition of new member below)

Discount Rate Assumption

The actuarial assumption that was called "investment return" in earlier CalPERS reports or "actuarial interest rate" in Section 20014 of the California Public Employees' Retirement Law (PERL).

Entry Age

The earliest age at which a plan member begins to accrue benefits under a defined benefit pension plan. In most cases, this is the age of the member on their date of hire.

Entry Age Normal Cost Method

An actuarial cost method designed to fund a member's total plan benefit over the course of his or her career. This method is designed to yield a rate expressed as a level percentage of payroll.
(The assumed retirement age less the entry age is the amount of time required to fund a member's total benefit. Generally, the older a member on the date of hire, the greater the entry age normal cost. This is mainly because there is less time to earn investment income to fund the future benefits.)

Fresh Start

A Fresh Start is when multiple amortization bases are collapsed to one base and amortized together over a new funding period.

Funded Status

A measure of how well funded, or how "on track" a plan or risk pool is with respect to assets versus accrued liabilities. A ratio greater than 100% means the plan or risk pool has more assets than liabilities and a ratio less than 100% means liabilities are greater than assets. A funded ratio based on the Actuarial Value of Assets indicates the progress toward fully funding the plan using the actuarial cost methods and assumptions. A funded ratio based on the Market Value of Assets indicates the short-term solvency of the plan.

GASB 27

Statement No. 27 of the Governmental Accounting Standards Board. The accounting standard governing a state or local governmental employer's accounting for pensions.

GASB 68

Statement No. 68 of the Governmental Accounting Standards Board. The accounting standard governing a state or local governmental employer's accounting and financial reporting for pensions. GASB 68 replaces GASB 27 effective the first fiscal year beginning after June 15, 2014.

New Member (under PEPRA)

A new member includes an individual who becomes a member of a public retirement system for the first time on or after January 1, 2013, and who was not a member of another public retirement system prior to that date, and who is not subject to reciprocity with another public retirement system.

Normal Cost

The annual cost of service accrual for the upcoming fiscal year for active employees. The normal cost should be viewed as the long term contribution rate.

Pension Actuary

A business professional that is authorized by the Society of Actuaries, and the American Academy of Actuaries to perform the calculations necessary to properly fund a pension plan.

PEPRA

The California **P**ublic **E**mployees' **P**ension **R**eform **A**ct of 2013

Prepayment Contribution

A payment made by the employer to reduce or eliminate the year's required employer contribution.

Present Value of Benefits (PVB)

The total dollars needed as of the valuation date to fund all benefits earned in the past or expected to be earned in the future for *current* members.

Rolling Amortization Period

An amortization period that remains the same each year, rather than declining.

Superfunded

A condition existing when a plan's Actuarial Value of Assets exceeds its Present Value of Benefits. Prior to the passage of PEPR, when this condition existed on a given valuation date for a given plan, employee contributions for the rate year covered by that valuation could be waived.

Unfunded Liability

When a plan or pool's Actuarial Value of Assets is less than its Accrued Liability, the difference is the plan or pool's Unfunded Liability. If the Unfunded Liability is positive, the plan or pool will have to pay contributions exceeding the Normal Cost.

EXHIBIT 12

Exhibit 12 - CalPERS Summary of Employer Contribution Rate Analysis**Stockton Comp Analysis Employer Contribution Rate Analysis**

Stockton (6/30/10)	23.271%	29.099%	31.790%	32.500%	33.200%	33.900%	34.600%	ND	ND	ND	Stockton (6/30/10)	14.087%	16.941%	16.881%	17.400%	17.900%	18.400%	18.800%	ND	ND	ND
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Annual Valuation Report as of June 30, 2011											Annual Valuation Report as of June 30, 2011										
Minimum Employer Contribution Rate -Safety Plan					Projected						Minimum Employer Contribution Rate -Misc. Plan					Projected					
Cities	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Cities	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Sacramento	23.187%	27.530%	27.781%	28.675%	30.300%	30.800%	31.400%	31.900%	ND	ND	Sacramento	11.727%	12.659%	12.844%	13.645%	14.500%	14.700%	14.900%	15.100%	ND	ND
Long Beach	17.097%	22.687%	22.315%	22.623%	24.300%	25.300%	26.200%	27.100%	ND	ND	Long Beach	12.297%	16.072%	15.159%	15.324%	16.300%	16.900%	17.400%	17.800%	ND	ND
Oakland	28.092%	30.368%	30.899%	33.346%	34.900%	35.200%	35.550%	35.800%	ND	ND	Oakland	19.885%	23.604%	25.115%	27.295%	29.100%	29.700%	30.200%	30.700%	ND	ND
Bakersfield	29.371%	33.511%	33.626%	35.094%	37.000%	37.600%	38.200%	38.800%	ND	ND	Bakersfield	12.711%	15.764%	16.148%	16.939%	18.200%	18.700%	19.100%	19.500%	ND	ND
Anaheim	26.513%	30.623%	30.860%	31.696%	33.600%	34.200%	34.700%	35.200%	ND	ND	Anaheim	16.551%	20.389%	21.642%	22.031%	23.600%	24.200%	24.700%	25.100%	ND	ND
Santa Ana	23.139%	28.848%	28.480%	29.406%	31.900%	32.700%	33.500%	34.200%	ND	ND	Santa Ana	12.780%	18.373%	20.099%	22.824%	24.700%	25.300%	25.900%	26.500%	ND	ND
Riverside	20.756%	25.303%	25.091%	26.894%	29.200%	29.900%	30.600%	31.200%	ND	ND	Riverside	14.507%	18.438%	18.277%	18.314%	19.100%	19.700%	20.200%	20.700%	ND	ND
Chula Vista	22.654%	26.134%	26.492%	27.316%	28.800%	29.300%	29.800%	30.200%	ND	ND	Chula Vista	19.599%	22.702%	23.668%	25.437%	26.900%	27.300%	27.700%	28.000%	ND	ND
Fremont	29.958%	36.538%	36.804%	39.450%	41.700%	42.300%	42.900%	43.400%	ND	ND	Fremont	18.360%	22.916%	23.611%	23.461%	23.900%	24.300%	24.700%	25.000%	ND	ND
Irvine	30.583%	32.678%	32.428%	34.309%	35.700%	36.100%	36.500%	36.900%	ND	ND	Irvine	18.548%	21.733%	22.746%	24.138%	25.100%	25.300%	25.600%	25.800%	ND	ND
San Bernardino ⁽¹⁾	23.105%	28.277%	30.115%	31.455%	33.400%	34.100%	34.700%	35.400%	ND	ND	San Bernardino ⁽¹⁾	13.276%	17.248%	17.355%	18.186%	19.800%	20.400%	20.900%	21.400%	ND	ND
Modesto	24.278%	28.600%	28.520%	30.607%	32.700%	33.400%	34.000%	34.600%	ND	ND	Modesto	9.221%	10.851%	10.935%	11.984%	13.600%	14.100%	14.500%	14.900%	ND	ND

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Average	24.894%	29.258%	29.451%	30.906%	32.792%	33.408%	34.004%	34.558%	ND	ND	Average	14.955%	18.396%	18.967%	19.965%	21.233%	21.717%	22.150%	22.542%	ND	ND
Median	23.733%	28.724%	29.318%	31.031%	33.050%	33.750%	34.350%	34.900%	ND	ND	Median	13.892%	18.406%	19.188%	20.173%	21.700%	22.300%	22.800%	23.200%	ND	ND
High	30.583%	36.538%	36.804%	39.450%	41.700%	42.300%	42.900%	43.400%	ND	ND	High	19.885%	23.604%	25.115%	27.295%	29.100%	29.700%	30.200%	30.700%	ND	ND
Low	17.097%	22.687%	22.315%	22.623%	24.300%	25.300%	26.200%	27.100%	ND	ND	Low	9.221%	10.851%	10.935%	11.984%	13.600%	14.100%	14.500%	14.900%	ND	ND

Stockton (6/30/11)	23.271%	29.099%	31.790%	34.605%	38.900%	39.800%	40.600%	41.400%	ND	ND	Stockton (6/30/11)	14.087%	16.941%	16.881%	17.939%	19.600%	20.200%	20.800%	21.400%	ND	ND
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Annual Valuation Report as of June 30, 2012											Annual Valuation Report as of June 30, 2012										
Minimum Employer Contribution Rate -Safety Plan					Projected						Minimum Employer Contribution Rate -Misc. Plan					Projected					
Cities	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Cities	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Sacramento	23.187%	27.530%	27.781%	28.675%	31.118%	33.200%	35.200%	37.300%	39.300%	41.300%	Sacramento	11.727%	12.659%	12.844%	13.645%	14.419%	15.300%	16.200%	17.100%	18.000%	18.900%
Long Beach	17.097%	22.687%	22.315%	22.623%	24.059%	27.100%	30.100%	33.100%	36.100%	39.100%	Long Beach	12.297%	16.072%	15.159%	15.324%	16.288%	18.000%	19.700%	21.400%	23.100%	24.800%
Oakland	28.092%	30.368%	30.899%	33.346%	35.145%	36.900%	38.700%	40.500%	42.300%	44.100%	Oakland	19.885%	23.604%	25.115%	27.295%	30.159%	32.000%	33.800%	35.700%	37.500%	39.400%
Bakersfield	29.371%	33.511%	33.626%	35.094%	37.536%	39.400%	41.200%	43.000%	44.800%	46.600%	Bakersfield	12.711%	15.764%	16.148%	16.939%	18.012%	19.400%	20.800%	22.200%	23.500%	24.900%
Anaheim	26.513%	30.623%	30.860%	31.696%	32.808%	35.000%	37.300%	39.500%	41.700%	43.900%	Anaheim	16.551%	20.389%	21.642%	22.031%	24.271%	25.900%	27.600%	29.200%	30.900%	32.500%
Santa Ana	23.139%	28.848%	28.480%	29.406%	41.710%	46.000%	50.300%	54.700%	59.000%	63.300%	Santa Ana	12.780%	18.373%	20.099%	22.824%	25.688%	27.700%	29.700%	31.700%	33.700%	35.700%
Riverside	20.756%	25.303%	25.091%	26.894%	29.041%	31.200%	33.400%	35.600%	37.800%	40.000%	Riverside	14.507%	18.438%	18.277%	18.314%	18.994%	20.700%	22.400%	24.100%	25.800%	27.500%
Chula Vista	22.654%	26.134%	26.492%	27.316%	28.857%	30.600%	32.300%	34.000%	35.700%	37.500%	Chula Vista	19.599%	22.702%	23.668%	25.437%	26.235%	27.700%	29.200%	30.700%	32.100%	33.600%
Fremont	29.958%	36.538%	36.804%	39.450%	40.711%	42.900%	45.100%	47.400%	49.600%	51.800%	Fremont	18.360%	22.916%	23.611%	23.461%	24.081%	25.500%	26.800%	28.200%	29.600%	31.000%
Irvine	30.583%	32.678%	32.428%	34.309%	35.545%	36.800%	38.000%	39.200%	40.400%	41.700%	Irvine	18.548%	21.733%	22.746%	24.138%	24.798%	25.600%	26.300%	27.100%	27.900%	28.700%
San Bernardino ⁽¹⁾	23.105%	28.277%	30.115%	31.455%	33.765%	36.100%	38.400%	40.800%	43.100%	45.500%	San Bernardino ⁽¹⁾	13.276%	17.248%	17.355%	18.186%	20.169%	21.800%	23.400%	25.000%	26.700%	28.300%
Modesto	24.278%	28.600%	28.520%	30.607%	34.304%	36.700%	39.100%	41.600%	44.000%	46.400%	Modesto	9.221%	10.851%	10.935%	11.984%	13.539%	15.000%	16.500%	18.000%	19.500%	21.000%

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Average	24.894%	29.258%	29.451%	30.906%	33.717%	35.992%	38.258%	40.558%	42.817%	45.100%	Average	14.955%	18.396%	18.967%	19.965%	21.388%	22.883%	24.367%	25.867%	27.358%	28.858%
Median	23.733%	28.724%	29.318%	31.031%	34.035%	36.400%	38.200%	40.000%	42.000%	44.000%	Median	13.892%	18.406%	19.188%	20.173%	22.125%	23.650%	24.850%	26.050%	27.300%	28.500%
High	30.583%	36.538%	36.804%	39.450%	41.710%	46.000%	50.300%	54.700%	59.000%	63.300%	High	19.885%	23.604%	25.115%	27.295%	30.159%	32.000%	33.800%	35.700%	37.500%	39.400%
Low	17.097%	22.687%	22.315%	22.623%	24.059%	27.100%	30.100%	33.100%	35.700%	37.500%	Low	9.221%	10.851%	10.935%	11.984%	13.539%	15.000%	16.200%	17.100%	18.000%	18.900%

Stockton (6/30/12)	23.271%	29.099%	31.790%	34.605%	41.385%	44.500%	47.700%	50.800%	54.000%	57.100%	Stockton (6/30/12)	14.087%	16.941%	16.881%	17.939%	20.090%	22.200%	24.300%	26.400%	28.600%	30.700%
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Notes:

ND means not disclosed in Annual Valuation Report

(1) San Bernardino is currently in Chapter 9

Source: CalPERS website (www.calpers.ca.gov)

EXHIBIT 13

Exhibit 13 - Pension Contribution Rate

Segal Rates per 9-11-13 forecast with Marshall Plan, 12.5% return for FY13, 7.25% Discount Rate:

	2009-10	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Safety Plan:																					
Normal Cost	19.289%	19.053%	19.193%	20.255%	20.675%	21.098%	20.313%	23.370%	22.200%	20.850%	20.270%	19.660%	19.140%	18.550%	17.970%	17.290%	16.580%	15.800%	15.020%	14.310%	13.540%
Unfunded Rate	2.232%	2.308%	4.078%	8.844%	11.115%	13.507%	21.072%	30.380%	33.460%	34.470%	35.420%	36.370%	36.870%	37.420%	37.960%	38.540%	39.120%	39.690%	40.220%	40.690%	41.160%
Safety Rate (Police+Fire)	21.521%	21.361%	23.271%	29.099%	31.790%	34.605%	41.385%	53.750%	55.660%	55.320%	55.690%	56.030%	56.010%	55.970%	55.930%	55.830%	55.700%	55.490%	55.240%	55.000%	54.700%
Misc Plan:																					
Normal Cost	10.825%	10.871%	10.844%	10.546%	10.268%	10.586%	10.379%	12.030%	11.860%	11.730%	11.560%	11.360%	11.180%	10.960%	10.700%	10.430%	10.180%	9.940%	9.690%	9.440%	9.200%
Unfunded Rate	2.065%	2.213%	3.243%	6.395%	6.613%	7.353%	9.711%	15.490%	17.400%	19.220%	21.170%	23.150%	23.320%	23.500%	23.680%	23.860%	24.010%	21.520%	21.630%	21.730%	21.820%
Miscellaneous Rate	12.890%	13.084%	14.087%	16.941%	16.881%	17.939%	20.090%	27.520%	29.260%	30.950%	32.730%	34.510%	34.500%	34.460%	34.380%	34.290%	34.190%	31.460%	31.320%	31.170%	31.020%

new
PERS rates
for 14-15

2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2034-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50
12.850%	12.160%	11.490%	10.870%	10.210%	9.650%	9.070%	8.530%	8.050%	7.660%	7.340%	7.120%	7.060%	7.070%	7.070%	7.070%	7.070%	7.070%	7.070%	7.070%	7.070%
41.530%	41.890%	39.430%	39.700%	36.630%	36.810%	28.110%	28.210%	28.270%	25.070%	25.060%	25.020%	17.890%	13.290%	10.310%	2.900%	0.000%	0.000%	0.000%	0.000%	0.000%
54.380%	54.050%	50.920%	50.570%	46.840%	46.460%	37.180%	36.740%	36.320%	32.730%	32.400%	32.140%	24.950%	20.360%	17.380%	9.970%	7.070%	7.070%	7.070%	7.070%	7.070%
8.990%	8.790%	8.610%	8.460%	8.310%	8.170%	8.050%	7.950%	7.870%	7.800%	7.750%	7.700%	7.670%	7.680%	7.670%	7.680%	7.670%	7.670%	7.670%	7.670%	7.670%
21.890%	21.950%	20.100%	20.130%	19.380%	19.400%	13.290%	13.290%	13.290%	13.290%	13.290%	13.290%	9.440%	8.340%	6.800%	1.940%	0.000%	0.000%	0.000%	0.000%	0.000%
30.880%	30.740%	28.710%	28.590%	27.690%	27.570%	21.340%	21.240%	21.160%	21.090%	21.040%	20.990%	17.110%	16.020%	14.470%	9.620%	7.670%	7.670%	7.670%	7.670%	7.670%

EXHIBIT 14

Exhibit 14 - Pension Expense as percentage of Total General Fund**Stockton LRFP Analysis - Exhibit A1**

(\$'s in millions)

Stockton Forecast	<u>Pension</u> <u>CalPERS Expenses</u>	<u>Total General</u> <u>Fund Expenses</u>	<u>Pension CalPERS Expenses %</u> <u>of Total General Fund Expenses</u>
11-12	\$ 14.14	\$ 158.60	8.9%
12-13	14.66	147.18	10.0%
13-14	17.94	160.68	11.2%
14-15	22.26	180.52	12.3%
15-16	32.18	198.91	16.2%
16-17	35.93	204.33	17.6%
17-18	37.48	210.39	17.8%
18-19	39.47	217.74	18.1%
19-20	41.56	224.46	18.5%
20-21	43.01	230.28	18.7%
21-22	44.35	236.15	18.8%
22-23	45.56	243.49	18.7%
23-24	46.78	249.68	18.7%
24-25	48.06	255.98	18.8%
25-26	48.58	261.48	18.6%
26-27	49.82	268.37	18.6%
27-28	51.09	275.10	18.6%
28-29	52.34	281.97	18.6%
29-30	53.62	288.65	18.6%
30-31	54.91	295.54	18.6%
31-32	53.19	299.20	17.8%
32-33	54.45	306.25	17.8%
33-34	52.37	322.85	16.2%
34-35	53.56	329.25	16.3%
35-36	43.82	340.55	12.9%
36-37	44.67	344.91	13.0%
37-38	45.57	357.52	12.7%
38-39	43.13	364.56	11.8%
39-40	44.07	374.56	11.8%
40-41	45.09	382.87	11.8%

Source: City of Stockton Long-Range Financial Plan Attachment A1

EXHIBIT 15

Exhibit 15 - Historical Pension Expense as a Percentage of General Fund Expenditures
(*\$'s in actuals*)

	FY 1998 - 1999	FY 1999 - 2000	FY 2000 - 2001	FY 2001 - 2002	FY 2002 - 2003	FY 2003 - 2004	FY 2004 - 2005	FY 2005 - 2006	FY 2006 - 2007	FY 2007 - 2008	FY 2008 - 2009	FY 2009 - 2010	FY 2010 - 2011	FY 2011 - 2012
	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual
Details														
Pension expense ⁽¹⁾	9,844,000	5,680,000	4,312,000	3,940,000	6,826,000	11,409,000	21,872,000	27,026,000	24,162,000	15,285,000	26,313,359	23,871,523	23,453,691	14,139,584
Total expenditures	110,139,000	118,770,000	126,278,000	143,480,000	134,524,000	141,569,000	157,168,000	167,166,000	176,488,000	182,000,000	203,445,456	173,638,869	175,714,272	158,601,291
Pension Expense as % of total	8.9%	4.8%	3.4%	2.7%	5.1%	8.1%	13.9%	16.2%	13.7%	8.4%	12.9%	13.7%	13.3%	8.9%

Average	Median	High	Low
15,581,011	14,712,292	27,026,000	3,940,000
154,927,278	157,884,646	203,445,456	110,139,000
9.6%	8.9%	16.2%	2.7%

Sources: FY1998-99 - FY2007-08, Comprehensive Annual Financial Reports; FY2008-09 - FY2011-12, LRI/P Backup provided by the City

Notes:

(1) Includes Safety and Miscellaneous Plan annual pension costs

(2) Does not include cash and investments with fiscal agents

EXHIBIT 16

Exhibit 16 - City of Vallejo Cash and Pension Expense as Percentage of General Fund

(\$'s in actuals)

	Actual FY 11 - 12 (1)	Projected FY 12 -13 (2)	Adopted FY 13 - 14	Forecast FY 14-15	Forecast FY 15 -16	Forecast FY 16 - 17	Forecast FY 17 - 18	Forecast FY 18 - 19
Cash Ending Available Balance	\$ 8,563,467	\$ 4,437,851	\$ 3,666,107					
Pension (Normal cost and unfunded liability)	10,441,493	12,381,398	14,227,665	14,516,646	15,843,137	16,877,685	17,912,233	18,626,217
Total expenditures	63,120,661	79,508,354	81,939,691	81,413,386	80,582,691	82,050,372	83,567,963	85,137,284
Cash % of Total expenditures	13.6%	5.6%	4.5%					
Pension % of Total expenditures	16.5%	15.6%	17.4%	17.8%	19.7%	20.6%	21.4%	21.9%

Notes:

(1) Unaudited

(2) Adopted Budget

Exhibit 17 - CalPERS Summary of Employer Contribution Rate Analysis**Vallejo Comp Analysis Employer Contribution Rate Analysis (California Cities with population between 110,000 to 130,000)**

<i>Annual Valuation Report as of June 30, 2012</i>										
<i>Minimum Employer Contribution Rate -Safety Plan</i>					Projected					
Cities	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016 -17	2017-18	2018-19	2019-20
Visalia	27.661%	30.672%	31.207%	31.553%	32.463%	33.900%	35.300%	36.700%	38.100%	39.500%
Simi Valley	23.909%	28.489%	28.642%	29.884%	30.784%	32.400%	34.100%	35.700%	37.400%	39.000%
Concord	24.501%	28.822%	31.098%	33.355%	34.151%	35.600%	37.100%	38.600%	40.100%	41.600%
Roseville	29.293%	31.750%	31.298%	34.311%	35.724%	36.900%	38.100%	39.200%	40.400%	41.600%
Santa Clara	27.223%	31.501%	31.939%	35.340%	38.977%	41.500%	44.100%	46.700%	49.300%	51.800%
Berkeley	36.029%	40.379%	42.017%	44.324%	46.573%	48.700%	50.700%	52.800%	54.900%	57.000%
El Monte	35.252%	46.415%	44.669%	46.117%	50.836%	54.000%	57.100%	60.300%	63.400%	66.600%
Downey	21.869%	26.725%	28.412%	29.539%	32.682%	35.000%	37.400%	39.800%	42.100%	44.500%
Costa Mesa	30.145%	34.063%	36.286%	38.542%	41.456%	43.300%	45.100%	46.900%	48.800%	50.600%
Inglewood	22.238%	28.341%	29.628%	31.549%	35.064%	38.500%	42.000%	45.400%	48.800%	52.300%

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016 -17	2017-18	2018-19	2019-20
Average	27.812%	32.716%	33.520%	35.451%	37.871%	39.980%	42.100%	44.210%	46.330%	48.450%
Median	27.442%	31.087%	31.253%	33.833%	35.394%	37.700%	40.050%	42.600%	45.450%	47.550%
High	36.029%	46.415%	44.669%	46.117%	50.836%	54.000%	57.100%	60.300%	63.400%	66.600%
Low	21.869%	26.725%	28.412%	29.539%	30.784%	32.400%	34.100%	35.700%	37.400%	39.000%

Vallejo (6/30/12)	32.564%	37.558%	42.264%	47.421%	50.838%	53.800%	56.700%	59.600%	62.600%	65.500%
Stockton (6/30/12)	23.271%	29.099%	31.790%	34.605%	41.385%	44.500%	47.700%	50.800%	54.000%	57.100%

Source: CalPERS website (www.calpers.ca.gov)